FEBRUARY • 1949

Vol. 6 • No. 2

THE INTERNATIONAL HOMEFURNISHINGS MARKET 19

GOOD BUSINESS AHEAD FOR THOSE WHO SELL ..... By Leonard C. Truesdell 22

PRODUCTION OF ENAMELED DISPLAY LETTERS ..... By W. I. Staaf 23

NATIONAL "SAFE TRANSIT" PROGRAM FORGES AHEAD .. 25

A PHOTO STORY OF REFRIGERATOR PRODUCTION 26

VITREOUS ENAMELS FOR ALUMINUM (Continued) ..... By P. J. Carlisle, A. J. Deyrup and Dr. A. O. Short 33

Features

FROM THE EDITOR'S MAIL 4

THE FINISH LINE — An Editorial 17

THE SUGGESTION BOX 35

SNAPSHOTS FROM INTERNATIONAL HOMEFURNISHINGS WINTER MARKET — finishfotos ..... 36 & 37

SNAPSHOTS OF AWIMA MEMBERS — finishfotos 41

MORE INTERESTING LETTERS ABOUT THE NATIONAL SAFE TRANSIT PROGRAM ..... 46, 47 & 48

Industrial News

THE WASHINGTON ROUND-UP ..... By Wilfrid Redmond 32

SEVENTH ANNUAL MEETING OF WASHER & IRONER MANUFACTURERS ASSOCIATION 39

NATIONAL HOME LAUNDERING CONFERENCE 40

INDUSTRY NEWS AND PERSONALS 51

Miscellaneous

ADVERTISERS' INDEX 72

CLASSIFIED ADVERTISING 72

LONDON GUARANTEE BUILDING
Michigan Avenue at Wacker Drive
THE HOME OF
finish

MONTHLY TRADE PUBLICATION
Established January, 1944
Published by
DANA CHASE PUBLICATIONS
360 North Michigan Avenue
Chicago 1
Telephone CEntral 6-1229

A trade publication devoted to the interests of the manufacturers of major home appliances and allied metal products. Covers plant facilities and manufacturing problems from raw metal to finished product, with special emphasis on metal finishing.

Free controlled circulation to management, purchasing, engineering and key plant personnel in companies intimately connected with the field covered. To others, subscription price $3.00 per year. Foreign subscription price (U.S. funds) $5.00 per year.

Editor and publisher, DANA CHASE. Associate editors, PROF. A. I. ANDREWS and PROF. R. M. KING.

Acceptance under the act of June 5, 1934, at Aurora, Illinois, authorized January 7, 1948.

COPYRIGHT 1949
DANA CHASE PUBLICATIONS
PRINTED IN U.S.A.

finish

FROM RAW METAL TO FINISHED PRODUCT

LORD HALL LIBRARY

From the Editor's mail . . .

an aid to shop men

Gentlemen:

Finish Magazine is an invaluable asset to the Porcelain Enameling industry.

It has helped us shop men tremendously in keeping abreast with the progress throughout the country.

Anthony J. Neri
Superintendent
Porcelain Enamel Dept.
Fleetwood Airflow, Inc.
Wilkes Barre, Penn.

---

please add to mailing list

Dear Sir:

I find that "Finish" magazine is of interest to me, and would be pleased to have my name added to the mailing list.

D. V. Van Gordon
Ceramic Laboratory
Metal & Thermit Corp.
Carteret, New Jersey

---

valuable technical publication

Gentlemen:

I enclose our Draft for $5.00 to cover a renewal of our subscription to FINISH. Although the notice telling us that our subscription expired with the December issue is dated October 21st, it only reached us here on the 4th. January.

Would you please tell your Circulation Department to try to get the warning notice off to us a bit earlier, and also to send any issues to us that we may have missed.

As long as we are able to get the necessary dollars, we want to continue our subscription to "FINISH," which we find one of the most valuable of all the technical publications to which we subscribe. . . .

A. S. Simpson, Director
A. Simpson & Son Ltd.
Adelaide, South Australia

air markers for smaller fields

To Finish:

Since WPB and CPA days when we went to bat for FINISH, I take pride in the publication just as the publishers and the industry must feel toward it. Since I began receiving FINISH, I have used many of the ideas presented in it to help small business concerns solve their own problems and the problems of their customers. The timeliness of your articles is refreshing and the advertising is inspirational — educational.

Since early 1947 I have been flying my own light airplane, and your articles upon the more generous use of porcelain enameled air-markers has been gratifying. Air markers of standard designs for smaller fields should also be considered by enamelers. I use two-way low frequency and VHF transmitter — still I often yearn for the sight of a clear cut air marker.

Lee Terry Williams
Box 105
Many, Louisiana

---

interested in new technique in enameled art

Dear Sir:

We have read with great interest an article by Mr. Earl S. Perrine, entitled "A New Technique in Enameled Art," published in the September, 1948 issue of "Finish."

We will be grateful if you will contact this artist on our behalf, asking him to tell us where we can get details of the airbrush used, and the supplier of the equipment and materials used. We shall be glad to have any other articles by the same writer on this subject.

Our Company is the largest of the South African porcelain enamelling companies, having two factories, one in Durban and one in Johannesburg. We do considerable business in porcelain enamelled signs using the screen and stencil processes. We feel that a technique similar to Mr. Perrine's will be of great help to us.

To avoid any out of pocket expenses being incurred by you, we suggest that you send heavy mailing matter, if any, to our agent, The Fenchurch Export Corporation, 37 Wall Street, New York 5, with request to them to forward to us.

D. Partington
Manager: Johannesburg
Union Enamel Company
Industria, Johannesburg

Mr. Perrine and suppliers please note.

---

a marvelous job

To Finish:

I have read with special interest your complete January issue of FINISH, but especially the part which you devoted to the safe transit program.

You are certainly to be complimented on this all-out move to set people right in their thinking toward the safe transit program. I think you have done a marvelous job in putting this over.

E. H. Shands
Director of Engineering
and Development

"Dear J. B.: Due to the repercussions of the steel situation, am unable to close the Acme deal. However, I will continue to work night and day until . . . . . "

AFTER 16 YEARS

...this Monel pickling basket was still holding costs down

"Sweet Sixteen . . . and never been cussed."

That parody on an old saying describes the Monel pickling basket illustrated above.

At work for over 16 years for the Porcelain Metals Corporation, Louisville, Ky., the basket shows little sign of its long service.

This record is not unusual, but *typical* of Monel equipment in pickling service . . . *trouble-free* service that reduces costly repairs and "down time."

Monel is not only highly resistant to corrosion. It is *strong* and *tough* . . . two properties essential to long life in equipment that must withstand heavy loads and bumps. These properties also make it easy to design and build lighter crates that carry greater loads with greater economy.

The International Nickel Company, Inc.,
67 Wall Street, New York 5, N. Y.

*Reg. U. S. Pat. Off.

INCO NICKEL ALLOYS

MONEL* • "K"* MONEL • "S"* MONEL • "R"* MONEL • "KR"* MONEL • INCONEL* • NICKEL • "Z"* NICKEL • "L"* NICKEL

Sheet . . . Strip . . . Rod . . . Tubing . . . Wire . . . Castings

Dividends throughout the year from this investment

Do you operate a porcelain enameling plant? As a Business? As a department of a finished product manufacturing plant? — Do you use large quantities of porcelain enameled parts?

If your answer is *yes* to any of these questions, one of your first investments for 1949 should be in a Porcelain Enamel Institute membership.

The dividends start immediately and continue throughout the year — dividends in plant operation, dividends in testing, dividends in technical and marketing information. You will have the cooperation and backing of one of the country's strongest and most influential trade associations.

You get these dividends in return for your cooperation and a very modest annual investment in association dues.

This Emblem . . . . . designed by P.E.I. identifies products finished in genuine Porcelain Enamel. It sets these products apart as having the highest quality finish and guides the purchaser in making his selection. It is offered to manufacturers using genuine Porcelain Enamel as an important part of their product finish.

1. MARKET DEVELOPMENT COMMITTEE — marketing, advertising and publicity.

2. COMMERCIAL RESEARCH COMMITTEE — market trends and opportunities.

3. PRODUCT STANDARDIZATION COMMITTEE — standards, testing and performance specifications.

4. PROCESS DEVELOPMENT COMMITTEE — new developments, equipment and processes for plant operation.

5. FORUM COMMITTEE — develops programs of importance for annual forum for plant men.

6. INSTITUTE DEVELOPMENT COMMITTEE — expanding the opportunities for greater Institute service and broadening Institute activity.

7. SALES AND MANAGEMENT CONFERENCE COMMITTEE — annual conference on selling methods and demonstration techniques.

8. PACKAGING AND SHIPPING COMMITTEE — Developing testing equipment standards for packaged products and coordinating information on the best methods for cutting shipping damage.

If you haven't applied for membership in the P.E.I., call your secretary now and dictate a note to —

PORCELAIN ENAMEL INSTITUTE, INC.

1010 VERMONT AVE. N. W., WASHINGTON 5, D. C.

from any angle BINKS

SPRAY FINISHING EQUIPMENT IS YOUR BEST BUY . . . . . .

1. Design The design of your Binks equipment has its start in large and small finishing departments where Binks designers study the performance of existing equipment and then improve on it. Binks equipment is truly "customer designed."

2. Complete line From Binks catalog you can select every item you need for the application of sprayed ceramic finishes...whether it is a few cents' worth of fittings, a ceramic spray booth or the Automatic Reciprocating Spray Machine.

3. Efficiency You will find that the watch-like precision of Binks ceramic spray guns and the advanced engineering of all Binks equipment pay big dividends in finer finishes, faster operation, fewer rejects.

4. Economy You save money with Binks equipment, not only through faster and better finishing but also in the longer life of the equipment itself. Binks ceramic finishing equipment pays for itself many times over.

5. Service No matter where your plant is located, there is a Binks Service Engineer nearby to keep your equipment in A-1 operating condition and to answer your ceramic finishing questions.

In Brief If you want the best in ceramic finishing equipment . . . backed by nationwide service . . . then be sure to ask for Binks.

"Binks equipment must do what you expect of it... it's our obligation to see that it does."

J. E. Roche
President

Binks MANUFACTURING COMPANY

3122-40 Carroll Ave., Chicago 12, Ill.

NEW YORK DETROIT LOS ANGELES ATLANTA BOSTON CLEVELAND DALLAS MILWAUKEE NASHVILLE PHILADELPHIA PITTSBURGH ST. LOUIS SAN FRANCISCO SEATTLE WINDSOR, ONTARIO, CANADA

Send now . . .

. . . for your free copy of our new Catalog-Data Book. Please request your copy on your company letterhead.

SAFE TRANSIT SAFE TRANSIT SAFE TRANSIT

ENGINEERED PACKAGING INSURES "SAFE TRANSIT"

★

The national "Safe Transit" program for reducing damage losses to finished products in transit requires a study of proper packaging "from the ground up."

We offer the facilities of our modern research laboratory supervised by experienced engineers, without obligation, to assist in pre-checking or package research work. We are very anxious to help in the successful development of this program.

Protect those valuable finished products with the right box or crate. We manufacture all types of wooden boxes and crates and are therefore in position to recommend the most economical and best package for your product.

★

NAILED OR HINGED CORNER
PLYWOOD CRAVENEER WIREBOUND
BOXES OR CRATES

CHICAGO MILL AND LUMBER COMPANY
33 South Clark Street Chicago 3, Illinois
Plants at: Helena, Ark. • Greenville, Miss. • Tallulah, La. • Rockmart, Ga. • Chicago, Ill.

The Invisible BONUS in every order of

PLANT TESTED

PORCELFRIT

● Many times we've told you that PORCELFRIT is "plant-tested" right here in our own job enameling plant. You know that we subject it to conditions of actual use before offering it for sale.

But that's not all. We fully recognize that your demands—or equipment, or methods—may differ from ours. Therefore, we make sure that PORCELFRIT is right for *you*—not just for us—by sending a trained service engineer to your plant to work things out with you. No obligation on your part. Drop us a line—or phone us—and we'll gladly send an Ing-Rich Service Engineer. It's on the house!

INGRAM-RICHARDSON MFG. CO. OF INDIANA, INC.

OFFICES, LABORATORY AND PLANT, FRANKFORT, INDIANA

Many Porcelain Enamelers Prefer

TREOPAX Z
TREOPAX S
TREOPAX
for

Color Stability
Scratch Resistance
Opacity
Enamel Working Properties

The experience of users is a good yardstick for determining the worth of a product. Our Field Engineers report the following summarized statements from Superintendents in the Porcelain Enamel Industry:

TREOPAX Z "Very pleased with results...standardizing 100% on Z."

TREOPAX S "Doing a beautiful job on table tops and sinks."

TREOPAX Z "All white now being opacified with Z."

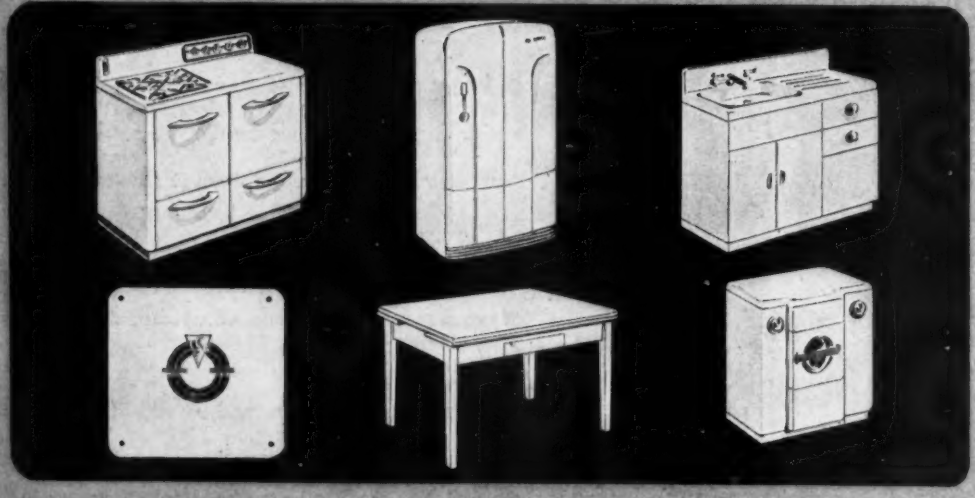
TREOPAX "Rates as the best opacifier made."

TREOPAX Z "Our standard opacifier in steel enamel."

TREOPAX Z "Giving excellent results in zircon enamel."

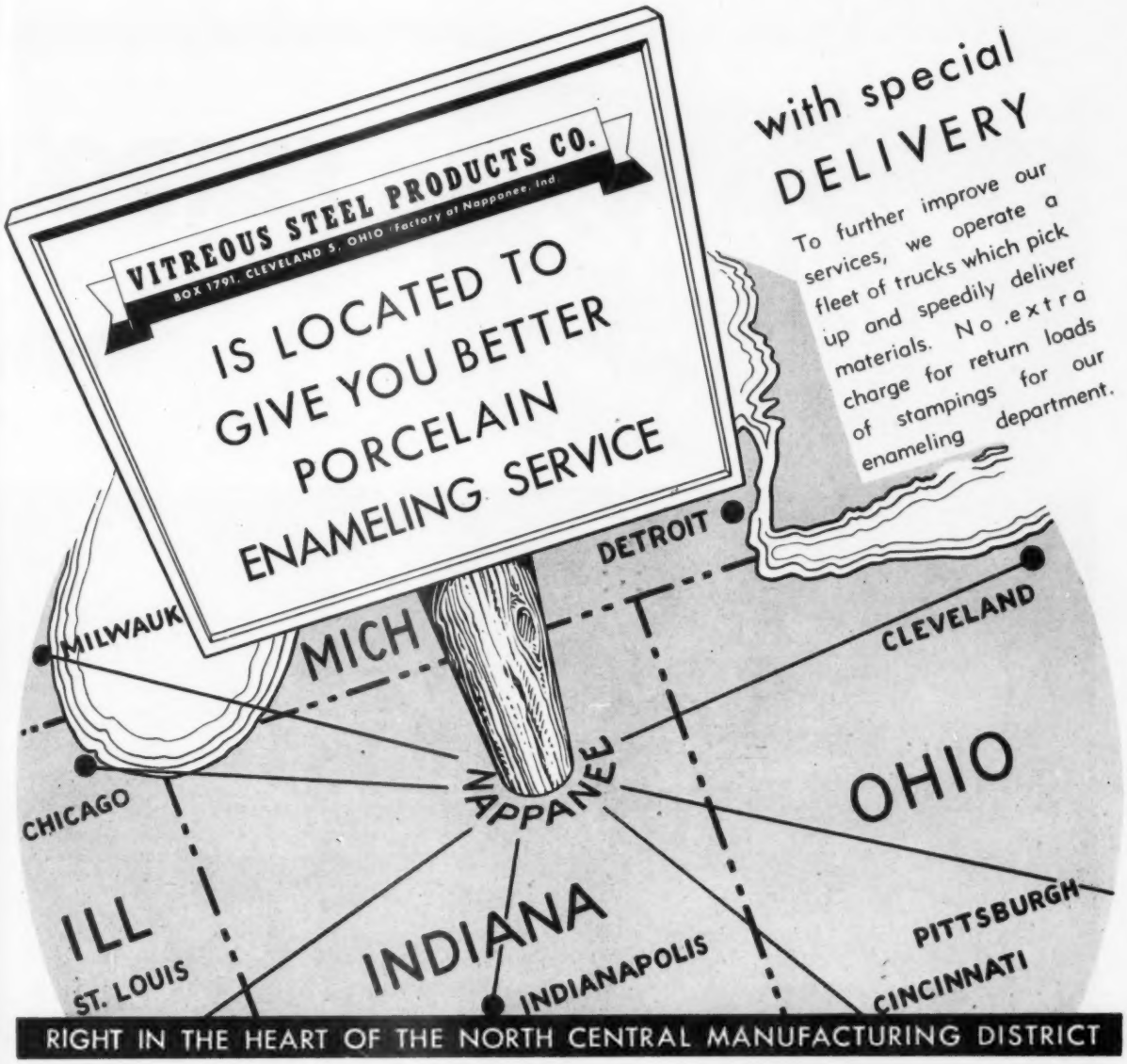
TREOPAX "Use being continued in cast iron and antimony AR."

Our field engineers are well equipped to discuss your problems. They can support their recommendations by laboratory data and by practical experience with shop conditions.



TAM

TITANIUM ALLOY MFG. DIVISION
NATIONAL LEAD COMPANY
Executive and Sales Offices: 111 BROADWAY, NEW YORK, N. Y. • General Offices and Works: NIAGARA FALLS, N. Y.


VITREOUS STEEL PRODUCTS CO.
BOX 1791, CLEVELAND 5, OHIO (Factory at Nappanee, Ind.)
IS LOCATED TO GIVE YOU BETTER PORCELAIN ENAMELING SERVICE
with special DELIVERY
To further improve our services, we operate a fleet of trucks which pick up and speedily deliver materials. No extra charge for return loads of stampings for our enameling department.
DETROIT
MILWAUK
MICH
CLEVELAND
NAPPANEE
CHICAGO
OHIO
ILL
INDIANA
PITTSBURGH
ST. LOUIS
INDIANAPOLIS
CINCINNATI
RIGHT IN THE HEART OF THE NORTH CENTRAL MANUFACTURING DISTRICT

Our modern, well equipped plant is most conveniently located. We are equipped to form and enamel your parts; or if you prefer, we will take your stampings and enamel them.

The services of a staff of expertly trained craftsmen and the knowledge gained through 28 years of experience with all types and sizes of stampings are at your disposal. The improvement of your enameled product through designing for lower cost production, modern styling and customer appeal receives our special attention.

As a matter of fact, we must pay special attention to every job in our shop. Running a job enameling plant as we do, we are out of business if we don't please our manufacturing customers. Send blueprints or samples and tell us quantities needed. We will be glad to quote on forming, enameling and delivery — or on enameling only, if you wish.

Plan... for the Lifetime Finish

VITREOUS STEEL PRODUCTS CO. CLEVELAND, OHIO

THANKS

For the grand response!

FERRO'S A

now "C

FERRO

4150

Analytical Check-up Crew

"booked" into April!

Ferro's newest contribution to increased efficiency and lower production costs, the *Analytical Check-up Service,* has already been scheduled solid for February, most of March and into April.

Introduced little more than a year ago, this new service is bringing the last of the *variables* in Porcelain enameling under control. For instance: within 48 hours, atmospheric contamination of the ware can be "spotted" and, invariably, means found for correction. Irregularities in firing, due to uneven temperatures, are now easily detected with Ferro's exclusive three-point temperature recording device. Moreover, this service includes a complete check-up on pickle room driers and furnaces as well as exacting analyses of atmospheric conditions in other parts of the plant.

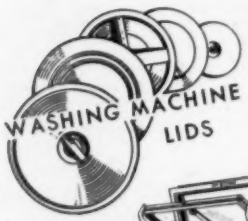
If you have not already arranged for Ferro's new *Analytical Check-up Service,* we suggest you act promptly. Contact your Ferro Representative or write us direct for complete details and a Check-up Reservation.

FERRO ENAMEL CORPORATION

4150 EAST 56th STREET ✓ CLEVELAND 5, OHIO

TANK HEATER

WASHING MACHINE LEGS



WASHING MACHINE LIDS

STEEL WINDOWS

HI-WAY FLARES

SCOOTERS

These are just a few of the many things we do.

You get more out of MONARCH STAMPINGS...

Because MONARCH PUTS MORE INTO THEM...

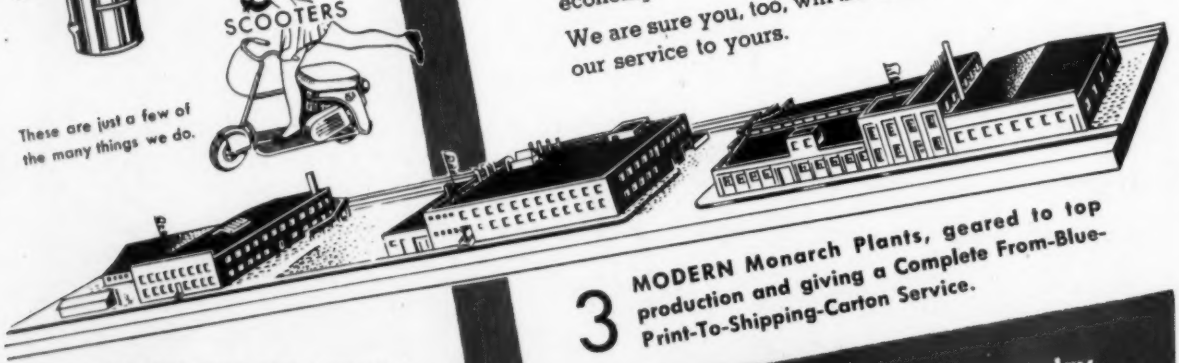
The quality of your stampings is determined largely by the skill and integrity of the company which produces them. It follows naturally that the greater the skill, the better the product.

That's how Monarch, in its 37 years of manufacturing, engineering and production experience, has developed a 4★★★★ production line.

★ Engineering Better Dies, Jigs and Fixtures
★ Skilled Pressmanship for High Quality Production
★ Precision Tooling for Minimum Tolerance
★ Double Check Inspection for Your Protection

The highest in skilled craftsmanship, plus the most modern equipment in every department, are the rule in Monarch's plants. To further improve our clients' products, we are constantly developing new and better methods — ways by which to give you better service with greater economy.

We are sure you, too, will benefit by adding our skill and our service to yours.



3 MODERN Monarch Plants, geared to top production and giving a Complete From-Blue-Print-To-Shipping-Carton Service.

For Details Write Today

FOR THOSE WHO HAVE MATERIALS AND DIES, STAMPING AND ASSEMBLY TIME IS NOW AVAILABLE.

MONARCH QUALITY

When you think of Stampings, think of

NEW MONARCH MACHINE & STAMPING CO.

406 S.W. NINTH STREET — DES MOINES 9, IOWA

Problem . . . . . .

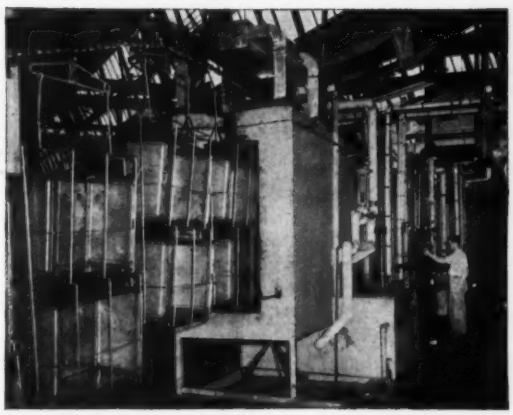
ELIMINATE REJECTS

due to improper cleaning & pickling

Solution . . . . . .

METALWASH

. . continuous spray pickling equipment



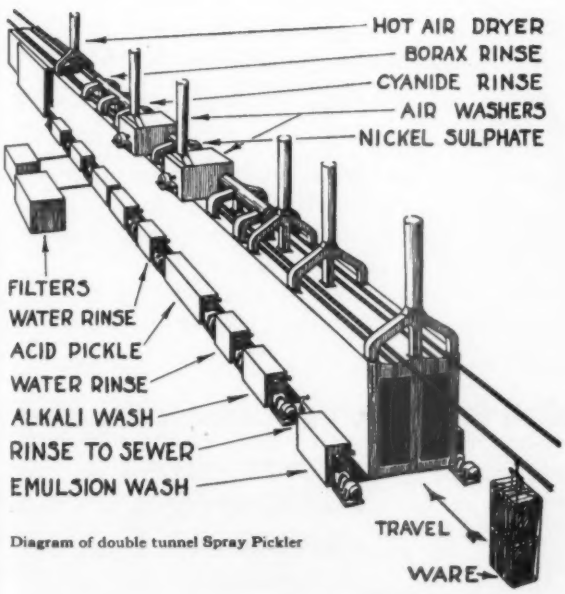


Diagram of double tunnel Spray Pickler

METALWASH Continuous Spray Pickling Equipment, for preparing steel parts for porcelain enameling, has resulted in the practical elimination of rejects caused by improper cleaning and pickling. In these machines the exact cycle is automatically controlled, eliminating the human factor. Spray cleaning and pickling is efficient and thorough. The ware does not dry between the stages of the cycle. Nickel sulphate spray provides a uniform deposit of nickel, of thickness recommended by good practice. Effective exhaust venting eliminates obnoxious fumes and vapors, and fully automatic machinery eliminates handling problems.

For better metal cleaning and pickling, submit your problem to METALWASH.

METALWASH MACHINERY CORP.
149 - 155 SHAW AVENUE IRVINGTON 11, NEW JERSEY

GETTING THE "BENDS"...

... from the BLENDS?

Our artist drew a diver . . . to help put this point across.

Diving—and then being properly decompressed on emerging—is a mighty ticklish business. Full of hazards!

There are plenty of "hazards" — and "pains", too — when an enameling shop tries to mix its own colors and strive for a perfect match.

THAT'S a job for specialists—O. Hommel Company, the leading example.

Here's why it will pay you to buy ready-mixed colors from Hommel:

(1) Speed up production;
(2) Avoid expensive experiments;
(3) Get the right match every time, on time;
(4) Keep up with your competitors.

Don't waste valuable production time and money "rolling your own".

Order matched colors from Hommel, world's largest supplier

Laboratory Controlled Production of Ceramic Supplies

- FRIT for Steel, Cast Iron or Pottery
- CERAMIC COLORS
- CHEMICALS
- BRONZE POWDERS
- METAL POWDERS
- SUPPLIES
- EQUIPMENT

Our Technical Staff and Samples are available to you without obligation. Let us help you with your problems.

THE O. HOMMEL CO.
PITTSBURGH 30, PA.
Pacific Coast Agents
L. H. BUTCHER CO.

World's Most Complete Ceramic Supplier

THE Finish Line

THE TOBOGGAN RIDE IS OVER — or at least the present situation in most lines of chief concern to *finish* would seem to prove so. From many angles the "*new*" situation with relation to major appliances and allied metal products may prove to be a very healthy turn of events. Yes, the toboggan ride is over as far as selling "anything," "anytime," and at "any price" is concerned. From now on we work our way up hill with improved product quality, strong selling and forceful advertising and promotion programs.

Sales training has the spotlight

Just a year ago in *The Finish Line* for February, 1948, in referring to the necessity and importance of personnel and sales training programs in manufacturing organizations, we said: " . . . if you do not already have a plan in operation, it's high time you give it some serious thought." There was certainly nothing original in that suggestion, but it does appear to have been a very timely *reminder*.

Most progressive manufacturers *have* been working hard during recent months to develop strong sales programs and charge the batteries of a sales force in preparation for the inevitable — a buyers' market.

Although the average manufacturer's salesman is a bit rusty, and the young men have never experienced the necessity of "selling," the task of sales training and organization development is not in any sense insurmountable.

The real job is at the retail level

The task that will be very discouraging to many producers is that of getting their sales story to the ultimate buyer. All of the high powered selling and advertising in the world will never accomplish the desired result until the retail salesman and his boss are a part of the selling team.

The "little lady" at home almost fell in a faint the other day when a salesman actually came to the door to "sell" an appliance. This was the one and only time since the war, however. You can bank on it the "doorbell pushing" *will* come back if the country is to absorb the potential output of the product manufacturers. There may be some out-of-work men and many retail failures before strong retail selling returns, but it *must* return. The manufacturer will play an important role in shortening the time element.

The business is "there"

Few question the fact that much of the "pent up" demand referred to so frequently since the war is still "pent up" at the consumer level. The trouble is that a big portion of it may *stay* "pent up" unless the retail salesman does his job effectively.

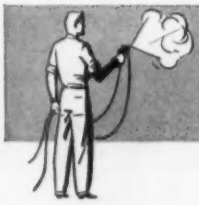
Read Leonard Truesdell's article, "Good Business Ahead for Those Who SELL," on page 22 of this issue, and you will see what Hotpoint's vice president of marketing has to say about the present situation in the household appliance field. Optimistic — certainly he's optimistic . . . but notice that the big business he predicts is based on a premise of more advertising, sales training and product promotion.

The manufacturer who "pulls in his horns" now, in the light of reduced demand from dealers and distributors, is likely to need a tombstone for his company name. Selling — stronger, harder selling — at all distribution levels is the only answer. If this fact is faced squarely and honestly by the manufacturer *now* and he acts accordingly, the major appliance and allied metal products industries have every opportunity to continue at high production levels.

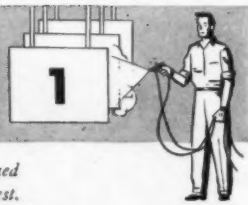
Dana Chase

EDITOR AND PUBLISHER

LORD HALL LIBRARY



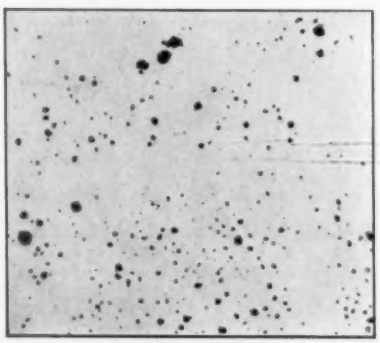
Enameler's Data Sheet No. 1



An informative series on titanium-bearing killed steel for the enameling industry. Issued monthly by Inland Steel Company. Reprints of all data sheets are available upon request.

How Carbon-Stabilizing Titanium Improves the Characteristics of Steel Enameling Sheets

For many years, metallurgists have worked to develop a superior enameling metal—one which would have high sag resistance, good drawing properties, and low warpage. Above all, they were looking for a metal to which the enamel cover coat could be directly applied.



Enlarged view (twice actual size) of the finish resulting from application of white cover coat directly to ordinary enameling iron.

Research Intensified

The beginning of World War II brought on a period of intensive and sustained research on these problems. The supply of cobalt oxide for ground coats at this time was limited, as was manpower. A process of applying white enamel directly to the base metal, eliminating the cobalt ground coat, would result in lower costs and a more satisfactory product, because of the thinner enamel coating.

Many white enamels have been developed for direct application but have seen little commercial use, mainly because of unsatisfactory base metals. If these white cover coats are applied directly to ordinary enameling stocks, and fired, the resulting finishes are found to be unacceptable because of blackspecks, enamel pits, and enamel blisters. These conditions are caused mainly by the carbon oxide gases formed at enameling temperatures. Carbon in the steel is present as iron carbide, which is highly reactive with iron oxide, hydrogen, etc., at these temperatures.

Tests proved that cover coat enamels could be successfully applied directly to carbon-free electrolytic iron, but this, of course, was commercially impractical. The problem, therefore, was to find an element which would combine with the carbon in steel to form a sufficiently stable carbon compound (carbide) so that the carbon would no longer be free to react.

Titanium Enameling Steel Developed

For some years, steel in which the carbon was combined with titanium had been of academic interest because it was non-strainaging, even in the as-annealed condition. About 1943, however, this steel was found to have certain desirable enameling characteristics:

(1) It could be white-enameled without a cobalt oxide ground coat,
(2) it was nonreboiling, and
(3) its resistance to sagging was high at enameling temperatures.

The first two of these characteristics are due directly to the carbon being stabilized. Titanium combines with the carbon in the steel, theoretically in the ratio of 4 to 1, to form titanium carbide (TiC), a compound comparatively stable at enameling temperatures. Titanium also combines with the nitrogen, sulfur, and hydrogen in the steel to form relatively stable compounds.

The resulting alloy is a basic open-hearth product having a nominal analysis of carbon 0.09 (max), manganese 0.50 (max), phosphorus 0.040 (max), sulfur 0.050 (max), silicon 0.10 (max), and titanium 0.20 to 0.50. It is known as titanium-bearing killed steel.

Other Properties

Titanium enameling steel has several other interesting enameling properties. For one, fishscaling is completely absent, regardless of the state of enamel adherence. Also, it has a comparatively low coefficient of expansion at enameling temperatures, which most likely accounts for the good resistance to hairlining in parts fabricated from this metal. Another important property of this metal is its excellent drawing quality.

Future Enameler's Data Sheets will further discuss the properties of Inland's TI-NAMEL titanium enameling sheets.

Today's demand for TI-NAMEL greatly exceeds our ability to supply it. But we look forward to the time when porcelain enamelers everywhere can take advantage of this superior enameling base metal.

Inland Steel Company, 38 S. Dearborn St., Chicago 3, Ill.

SALES OFFICES: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul.

OTHER PRODUCTS: Bars • Sheets • Strip • Structurals Plates • Tin Plate • Floor Plate • Piling • Reinforcing Bars Rails • Track Accessories

INLAND STEEL

INLAND TI-NAMEL

Reg. U. S. Pat. Off.

TITANIUM-BEARING KILLED STEEL ENAMELING SHEETS

The international homefurnishings market

winter market indicates that "selling" is again in order

JUDGING from the visitors at the International Homefurnishings Market, held in Chicago, January 3 to 15, "selling" is again in order for appliances and homefurnishings.

The 1949 winter market, held simultaneously at The Merchandise Mart and the American Furniture Mart, found buyers less desirous of placing immediate orders for household appliances and other homefurnishings than were buyers at the past three winter markets. It was evident that the era of merchandise allotment is past. Buyers are now determining the quantity and quality of goods bought.

Selling and prosperity

Walter D. Fuller, president of Curtis Publishing Co., told a crowd of more than 1000 persons attending the annual banquet of the National Retail Furniture Association, at the Stevens Hotel, January 4, that when America forgets to sell, "everything falls off."

He told the buyers that "if we guard against the mistakes of the 1920's and 1930's, if we stay alert, hard working and realistic, we can continue American prosperity."

"About the year 1925," said the speaker, "America began to cut its ratio of selling effort. We had solved the economic problem of the ages, there were to be two cars in every garage, happiness and prosperity were a certainty, hence why keep up the hard, the expensive work of selling? Anyway, selling efforts did slow up, and in the fall of 1929 the inevitable result of such a program came to a head and ushered in ten years of heavy depression.

"What happened after 1929? We had begun to cut our selling ratios in the middle twenties; more serious, we had lost our conviction as to the importance of the selling stimulus and its essentiality to economic progress. Hence, when trouble arrived in 1930, we cut selling expenditures sharply. These cuts continued until 1933 when we lost some of our hysteria and we realized we had to go to work. . . . .

"Think what just one per cent of national income added to selling effort would mean in this coming critical year of 1949. The figure would still be less than the average expenditure (3%) of the early 1920's, but the extra amount thrown in to tip the scales would be over two thousand million dollars."

Major appliance market

Members of the press were furnished with a view of conditions in the major appliance industry at a press conference at The Merchandise Mart on the third day of the market. Industry representatives at the conference were Harry Parsons, vice president of Landers, Frary & Clark; C. M. Dunn, vice president of Estate Stove; and Wm. C. Conley, Jr., national sales manager for Coolerator.

In discussing production of refrigerators and freezers, Conley said that the "total figures for 1948 are not in, but will run around 4,000,000 units. Everything indicates that in 1949, production (for 1948) will be exceeded, going between 4 and 5 million. . . . Freezer sales have been estimated at 800,000 units for this year. . . . On freezers we found a definite trend to larger sizes with the public buying now somewhere between the 13 and 16 cubic foot size." Regarding prices, Conley stated "there is every chance for an increase." He also pointed out that there is a tremendous replacement market as a high percentage of the 5 million electric refrigerators in use are "over ten years old."

An astonishing volume

"I think that when we talk 'offs' and 'ons' of business," Parsons told the members of the press, "we ought to take into consideration the fact that

Eye-catching exhibit of Admiral Corporation in American Furniture Mart was unique in that a glass partition separated the "prospector" and his burro.

finishfoto

LORD HALL LIBRARY

finishfoto

In "Norge Little Theatre," Paul N. Berner, sales manager of Norge's home laundry division, demonstrates new automatic clothes washer.

1947 and 1948 were tremendously big years. If business is off 5, 6, or 7%, it is still an astonishingly large volume of business."

Speaking of the washing machine industry, Parsons said "The automatic (washer) has gone out of all bounds. They sold very generously and very widely across the country. . . . The conventional washer has been running along at about 2½ to 3 times prewar volume, and obviously production has kept pace. It think there is a little slowing up. I don't mean to say that the market is going to be bad. I believe that in 1949 we will get out at the end of the year at about the same place we did in 1948."

Continuing, Parsons said "I think the electric range industry has gone along in a more sensible fashion possibly than other items. The production of ranges, going back to 1941, was 728,000 units. While we have all increased our facilities, and we all sold everything we could make right up until two months ago, when things began to slow up a little, in 1947 the industry did about 1,200,000 units which is roughly a 50 per cent increase over 1941 figures. That is a big increase in the electric range business, but a very small increase comparable to what was done in refrigeration and washing machines and vacuum cleaners too. 1948 looks like it will come out about one million three to one million four hundred thousand units for the industry—a slight increase over 1947. . . . In 1949 we want at least to maintain that volume.

"I think the electric water heaters have made the greatest progress of any appliance in the electrical field. In 1940, the figure was 178,000, as I remember it, and in 1947, it was 1,100,000 units—a big jump," Parsons pointed out.

Washington newsletter economics

Deriding economists who make a habit of predicting business conditions, Merle J. Fisher, of International Furniture Co., stated before a NRFA clinic, January 4, that "such forecasts are either good or bad guessing, and while planning must be a part of any business with various factors taken into consideration, the 'by guess and by golly' methods that come from reading a Washington newsletter may lead to trouble."

W. E. S. Griswold, Jr., of W. & J. Sloane Co., N. Y., presented the retailer's viewpoint at the clinic. He said that among the most important manufacturers' achievements stylewise, he considered dual-purpose homefurnishings, functional furniture, and the emphasis on color. *(See Frederic H. Rahr's reference to W. & J. Sloane in "The Case for Color in Kitchens," July, 1948* finish.*)*

At a press luncheon at the American Furniture Mart, Dorothy Draper, noted decorator, gave cosmetics some of the credit for bringing color to homefurnishings. The housewife wanted to bring color into her home after she found what a little color on her fingernails and lips would do. "The magic of showmanship is gay color, lovely entrancing color. . . . The public is hungry for a fresh point of view presented in an unexpected and attractive form."

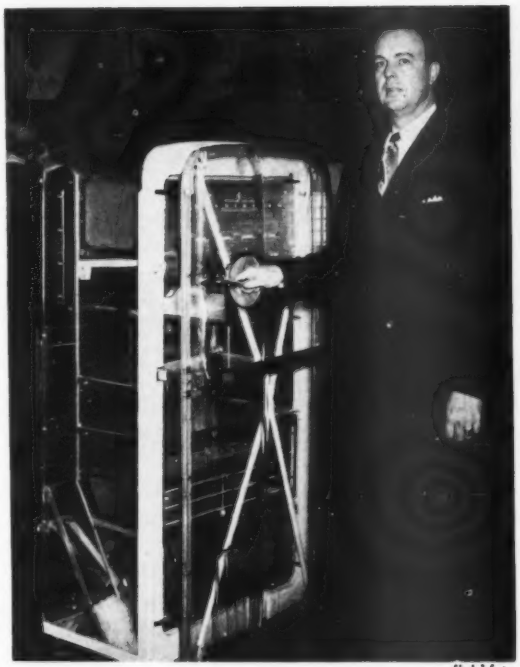
Speaking on "Merchandising for Profit," Mrs. Draper declared that three essentials of profitable merchandising are (1) analysis, (2) coordination, and (3) showmanship. "If I had always taken this first essential step (analysis), I wouldn't have designed a beautiful large grey envelope for Hampshire House which proved to be too large to go into the mail chute," confessed the speaker.

At the January market dinner of the National Wholesale Furniture Association, at the Furniture Mart, W. Lipscomb Davis, president of Davis Cabinet Co., predicted that in comparison with prewar standards, furniture business in 1949 will be exceptional.

Colored ranges are here

In their space at The Merchandise Mart, Supermatic Products Corporation exhibited gas ranges finished in four different colors, white, tomato red, Nile green, and golden yellow. The white range was completely porcelain enameled, while the colored ranges were porcelain enamel except for a stainless steel cook top. Special flat top grates on the ranges are vitreous enameled cast iron. (While the "strong" colors used by this manufacturer may not appeal to many home decorators, it indicates that at least some manufacturers are preparing for color in home appliances.)

Hotpoint, Inc., exhibited its new automatic electric dishwasher on which production in three models was begun the last week in December. The three models, which feature an electric drying unit, are an under-the-counter model, a free standing unit,



finishfoto

F. E. Howell, of Leonard Division of Nash-Kelvinator, is shown with their transparent display refrigerator which is used to demonstrate design characteristics.

and a unit incorporated in a 48-inch sink. The acid and stain resisting porcelain tub on the new dishwasher has rounded interior corners, making the unit entirely self-cleaning, according to Leonard C. Truesdell, vice president of marketing for Hotpoint.

A new automatic clothes washer was exhibited for the first time by Norge Division of Borg-Warner Corp. The new machine has a maximum single load capacity in excess of 18 pounds of clothes. It was stated that the washer is fully automatic, yet may be stopped during any of the various washing, rinsing or drying phases, for repetition or avoidance of these phases if desired. The work-top and door of the unit are porcelain enamel.

Coolerator Refrigerator Co. exhibited for the first time its entry in the electric range field, and also a left hand door opening refrigerator which is said to be available at no extra charge.

Rutenber Electric Company showed its new Marion "400" deep fryer with a white porcelain base with rounded corners and a chrome top. It has a frying compound capacity of 3 pounds. A feature of the deep fryer is that heat is applied to the side of the fat container instead of the bottom, thus eliminating the carbonizing of food settlings.

One of the newest exhibits at The Merchandise Mart was that of Tennessee Enamel Mfg. Co., showing its line of Temco all-porcelain enameled radiant and circulating room heaters.

Combination circulating and radiating gas heaters were displayed by the Moore Division of Conlon-Moore Corporation. End panels of the heaters accelerate circulating heat while double-wall refractory radiants absorb and reflect radiant heat.

Samuel Stamping and Enameling Company presented its line of Samco all-porcelain enameled gas heaters with porcelain enameled burners.

Blackstone Corporation, celebrating its 75th anniversary, presented a display of old-time wooden tub hand-operated washing machines along with its modern line of washers at its display room at the American Furniture Mart.

Dearborn Stove Company displayed its new evaporative coolers along with its regular line of gas heaters.

Showmanship in sales

Nash-Kelvinator displayed a transparent display refrigerator used to demonstrate design characteristics.

American Central exhibited for the first time a portable American Kitchens Little Theatre, approximately six feet high and five feet in diameter, which contains four kitchens styled in perfect miniature with synchronized sound describing each kitchen.

See more photos . . . Pages 36 & 37

A. B. Ritzenthaler, vice president - sales, Tappan Stove Company, shows new range to A. Benjamin, of Benjamin Appliances of Detroit, Mich.

finishfoto

Good business ahead for those who SELL

By Leonard C. Truesdell • VICE PRESIDENT OF MARKETING, HOTPOINT, INC. CHICAGO

THE electric appliance industry is as sound as at any time in its history, but the application of proved selling fundamentals, frequently unnecessary in the postwar period, must be resumed to maintain a high level of sales.

Record production in 1948 satisfied the pent-up demand for nearly all major appliances and brought inventories to dealers for the first time in postwar. However, electric utility expansion, high employment and wage levels, home building programs, and a growing farm market will combine to create increased markets and keep business good for a long time to come.

Present high materials and labor costs make downward price revisions unlikely during the period ahead. Although some price adjustments are inevitable, competition among manufacturers will more likely take the form of new products and new product features to increase the sales appeal of work saving appliances.

More advertising, sales training and product promotion

Marketing programs will include larger national advertising budgets with continuing emphasis on sales training and product promotion to give retailers maximum assistance in selling appliances. Further strengthening and refining of retail organizations will be carried out in the year ahead, with manufacturers competing for the strongest dealer outlets.

Five major elements will have a strong bearing on the appliance industry, just as they affect the over-all national economy: employment, income, demand, sales, and production. Current employment is substantially above the 56 million level of 1940. In 1948, the $5000-and-up income group, a prime market for major electric appliances, represented 21 per cent of all American families, or a total of 8.8 million family units. This was a 20 per cent increase over the 1939 level.

Growing demand, backed by ability to buy, is illustrated by the 75 per cent increase in the amount of money available for the purchase of goods and services. Discretionary expenditures in 1948 were approximately $118 billion, compared with $68.3 billion in 1940.

Sales estimate for '49 equal or exceed '48 levels

Estimated 1949 sales for nearly all major appliances will reach or exceed peak levels attained in 1948. Steady expansion of the market for electric ranges, disposals, dishwashers, and water heaters, appliances that have low saturation are viewed as the biggest new factor in the 1949 outlook. All of these appliances are enjoying unprecedented acceptance.

Competition has been heightened not only by production volume, but also by the number of new manufacturers in the water heater business. Before the war, 22 manufacturers were making electric ranges; today more than 40 firms are competing in this field. I doubt that all of the new manufacturers will survive the sharp competition ahead.

Marketing programs for 1949 have been designed to assure markets for the expanded appliance industry, and emphasis will be placed on these seven specific areas of marketing: market research and analysis, product planning, advertising, sales promotion, distribution, retail selling, and service.

Industry to expand market research activities

The industry's plans in each area include broader market research acti-

to Page 43 →

Sales demonstration is important in "selling." Here Edward R. Taylor, manager of market development for Hotpoint, points out construction features of a cutaway double oven pushbutton electric range.

Production of enameled display letters

this article gives attention to pressure-form steel letters finished in porcelain enamel

By W. I. Staaf • CHRONOFLASH COMPANY, RENNERDALE, PENN.

OUR pressure-form steel letters are formed from one piece of 18 gauge steel with dies, and are finished in gleaming porcelain enamel in any standard color. The net results are beautiful raised letters which will enhance the appearance of signs or displays, and also be unaffected by any weathering condition. They stay bright for years, and never require refinishing.

We first developed pressed steel porcelain enameled cut-out letters about 13 years ago for one of the major oil companies for use on service stations. As the work required the use of all of the letters of the alphabet in various sizes and designs, the cost of dies was quite an item. But after considerable experimentation, we finally cut these costs approximately 80 per cent.

At first we only fabricated the units and had enameling plants in our locality do the actual finishing. We had no experience in actual enameling although the writer has been indirectly associated with the porcelain enameling industry for the past 20 years. We manufactured letters for enameling plants, oil companies, and for the general sign trade until the war caused a shutdown on this type of fabrication.

When we set out to resume our business at the end of the war, we discovered that jobbing plants had orders beyond their capacity. And as we had just completed fabrication of one order for a special type letter, it became imperative that we do our own enameling.

Enameling equipment

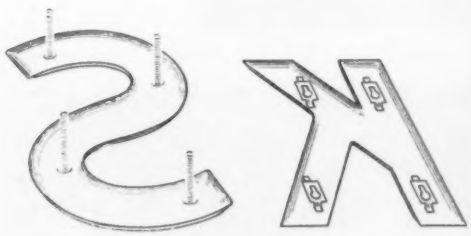
We bought a small electrically heated furnace, and built our own device for push button operation of door and double charging rack. With the aid of engineering advice from our frit supplier, we started production of porcelain enamel finishes.

Pickling facilities

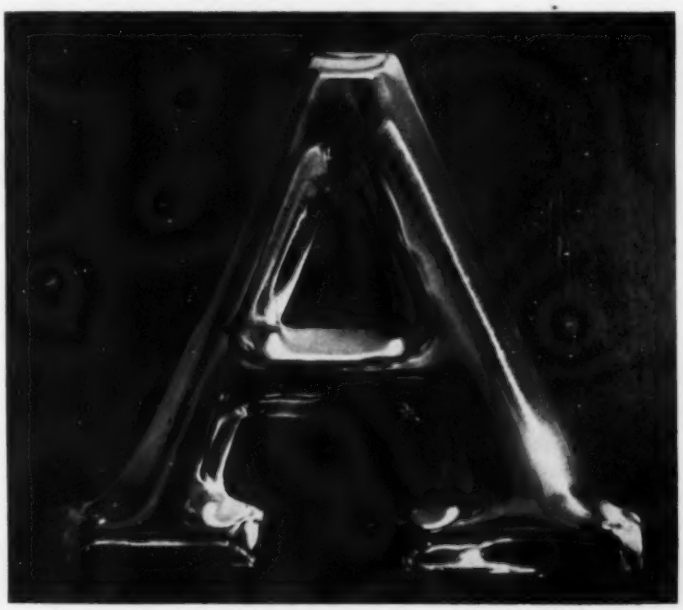
Our pickling set-up for cleaning the letters prior to the application of the enamel consists of five small tanks, containing cleaner, rinse, acid, rinse, and neutralizer. We have been using a muriatic acid bath at room temperatures which has proven very satisfactory. The cleaning and neutralizing solutions are heated with gas burners placed directly under the steel tanks. A jet pump supplies more than sufficient comparatively soft spring water from a nearby stream.

Infra-red drying

For drying sprayed enamel coats, we use banks of infra-red lamps placed under the letters. We have found these lamps work better on the



Above: Keyhole brackets and stud bolts are securely welded to letters before enameling. Special brackets, holes or lugs can be adapted as required.



Right: A typical pressure-form steel letter formed from one piece of 18 gauge steel and finished in porcelain enamel.

posed in the firing chamber, with the exception of those on the bottom which are covered with a heavy cast floor. The furnace is shut down completely at the end of each day and is automatically turned on one hour before starting operation in the morning.

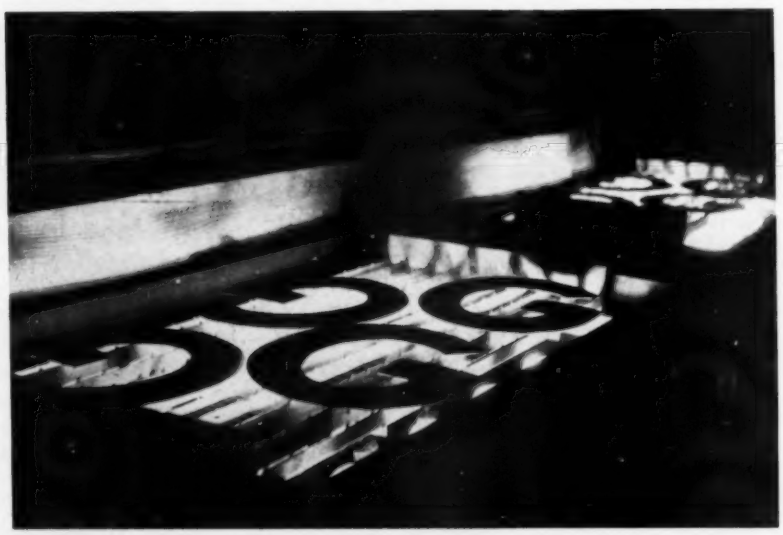
Glass screen protects operator from furnace heat

A piece of glass having a high lead content is suspended between the operator and the furnace opening to act as a barrier to the strong infra-red heat rays when the door is opened. Push button door control and signal lamp timer are located in front of the operator.

to Page 43 →

Above: The pickling setup consists of five small tanks containing cleaner, rinse, acid, rinse, and neutralizer.

Right: For drying enamel coats, banks of infra-red lamps are placed under the letters.

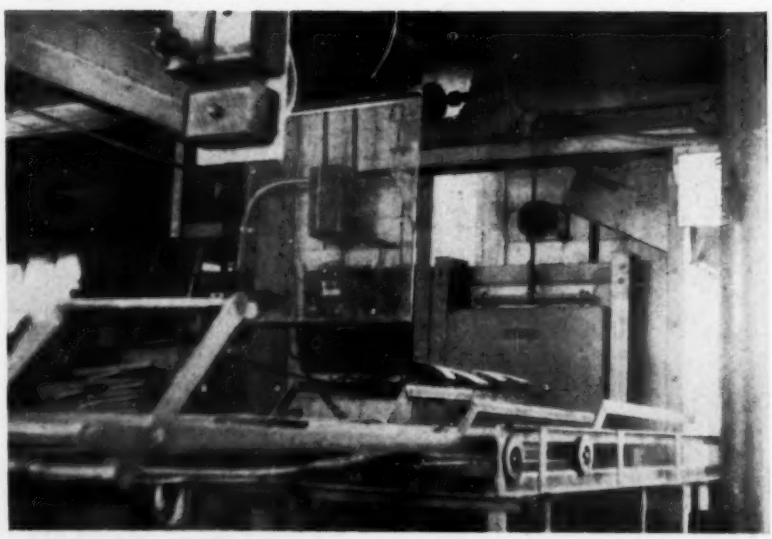


Below: The ware is fired on flat racks. By use of a double fork arrangement the furnace is unloaded and loaded with one opening of door.

darker or ground coats than on light cover coats. The ware is heated from within to prevent surface drying and consequent tearing of cover coats. We believe this method of forced drying is largely a responsible factor in our successful firing of enamels.

Inasmuch as most of our work is cover coated on one side only, we fire everything on flat racks. By the use of a double fork arrangement, we load and unload the furnace with one opening of the door. The furnace is a standard element type electric box furnace operating on 220-volt 3-phase current with automatic temperature controls.

Heating elements are placed on both sides, top and bottom, and are ex-



SAFE TRANSIT program forges ahead

THE National "Safe Transit" program for the reduction of packaging and shipping losses, and "designed to deliver the finished product safely from the assembly line to the final customer," is forging ahead rapidly with each succeeding day. Reports from all sections of the major appliance and allied metal products industries—and, for that matter, from other industries too—indicate enthusiastic responses to the simplified and coordinated program instituted under the sponsorship of the Porcelain Enamel Institute. Representatives of the Coordinating Committee, such as Chairman R. F. Bisbee, Westinghouse Electric Coporation; E. H. Shands, Geo. D. Roper Corporation, technical chairman; Edward Mackasek, PEI Managing Director, secretary; and Dana Chase, *finish*, educational chairman, have appeared before many of the major associations to explain the details and purposes of the cooperative movement. *(See complete outline of program in January* finish, *pages 19 to 35, inclusive.)*

Messrs. Bisbee and Mackasek appeared before the Institute of Cooking and Heating Appliance Manufacturers, gas range and electric range divisions respectively, to present the program. Under the direction of R. H. Thompson, chairman of the Traffic Committee for the American Washer and Ironer Manufacturers Association, and general traffic manager for the Maytag Company, Messrs. Bisbee and Shands appeared before this group at their annual meeting. Dana Chase met with representatives of the National Electric Sign Association to explain the details of the program. Bisbee and others have appeared before the enamelers' clubs in the East and Midwest and Mackasek will speak to the Pacific Coast club.

Representatives of the various carrier associations, such as A. L. Green, Association of American Railroads; A. E. Dowling, Railway Express, and W. L. Yingling, American Trucking Associations, Inc., together with representatives of testing laboratories and testing equipment manufacturers have been generous with their time in furthering the general knowledge concerning the program. Representatives of packaging associations are to add their voices.

Individual manufacturers contacted

Copies of Project I *(blue book)* and Summary of Plan of Procedure *(red book)* have been distributed to individual manufacturing company members by representatives of each of the major associations, and in the case of all of the major appliance groups, such as GAMA, NEMA, ICHAM, AWIMA, etc., the program is now in the hands of the individual producers for study and appraisal.

It is expected that by the end of January a high percentage of the individual manufacturers will have indicated to their respective associations their willingness to back the "safe transit" program by installing the two simple tests—impact and vibration—for pre-testing their finished PACKAGED PRODUCTS prior to shipment.

A worth while number of major appliance producers have already installed the system, and reports indicate enthusiastic support based on

to Page 46 →

read the enthusiastic letters

The "Safe Transit" program is as simple as A, B, C

A. **Each individual manufacturer producing a major appliance or allied metal product indicates to his respective association representative or association head office that he intends to participate in the "Safe Transit" program for the reduction of shipping losses.**

B. **Each individual manufacturer purchases or builds two simple testing devices—an incline impact tester and a vibration tester—and buys one piece of testing equipment for measuring severity of tests—or—he arranges with an accredited laboratory to conduct the necessary tests. Total purchase cost of equipment —three pieces—under $2,000. (Will be less if sufficient orders are placed.)**

C. **The individual manufacturer tests his PACKAGED PRODUCT, to determine shipability, prior to producing large quantities for shipment or placing in storage. (Periodic testing is also recommended for control purposes.)**

This simple A, B, C program can have but one result: Reduced shipping losses for each cooperating manufacturer and, as has been proved in many instances, a good chance of actually reducing overall PACKAGED PRODUCT cost. No one can lose! Let's all join up!

Send a YES vote to your association today!

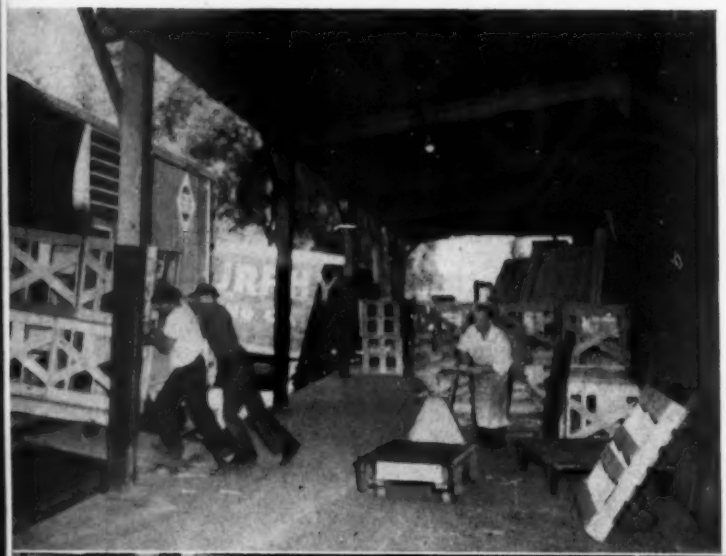
A photo story
of refrigerator production

pictorial review of raw steel being shaped into a glistening white home appliance

THROUGH the coordinated efforts of over 2000 factory, supervisory and office employees, materials and parts are assembled at the St. Paul (Minn.) plant of Seeger Refrigerator Company and made into a product which gives useful service to American homemakers.

Following is a series of pictures which show the material from the time it is received until the refrigerator has been completed and loaded into a boxcar for shipment.

PHOTOS COURTESY THE SEEGER RE



1. Above: The overhead crane is shown unloading a railroad car of steel in the steel storage warehouse under the direction of the steel issue foreman.

2. Left: Storeroom men unload units from railroad car. Over 6000 items are handled by storeroom crews to supply production and maintenance departments.

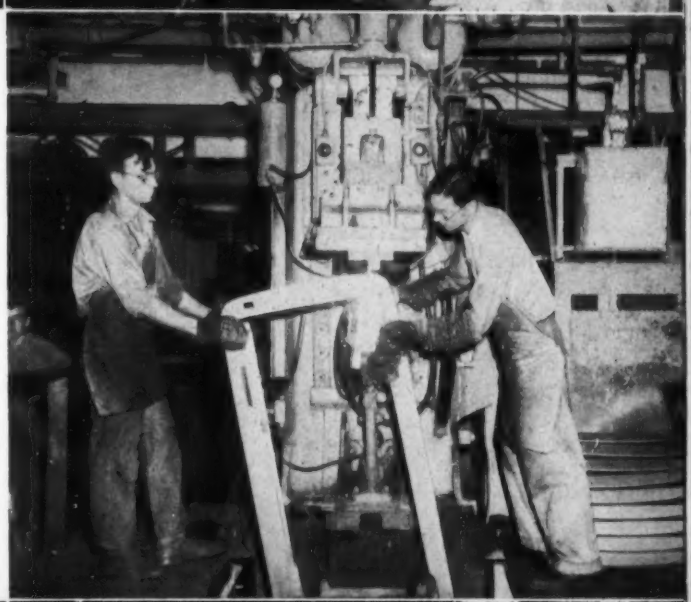
3. Above: Bundles of steel are broken, and sheets separated and loaded onto hand trucks. When truck is loaded, the steel is moved to shearing section.

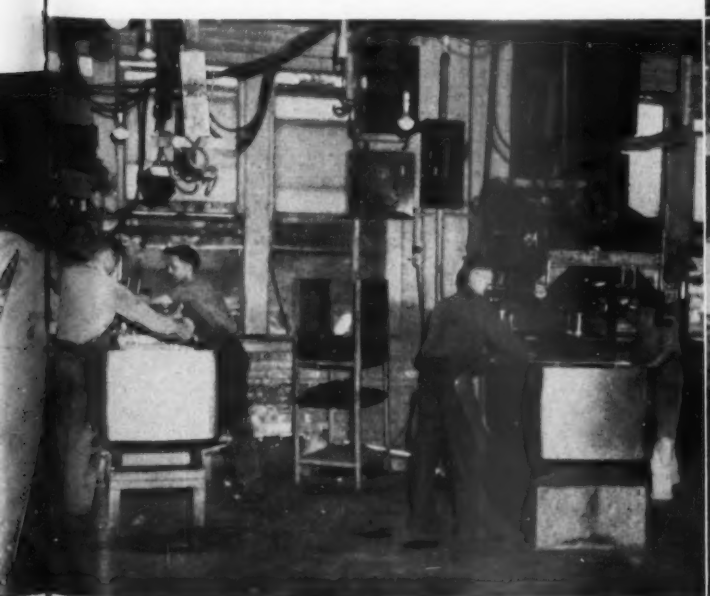
4. Above: Steel is issued to shearing section on basis of a shearing schedule. Necessary pieces are then cut from the sheets according to specifications.

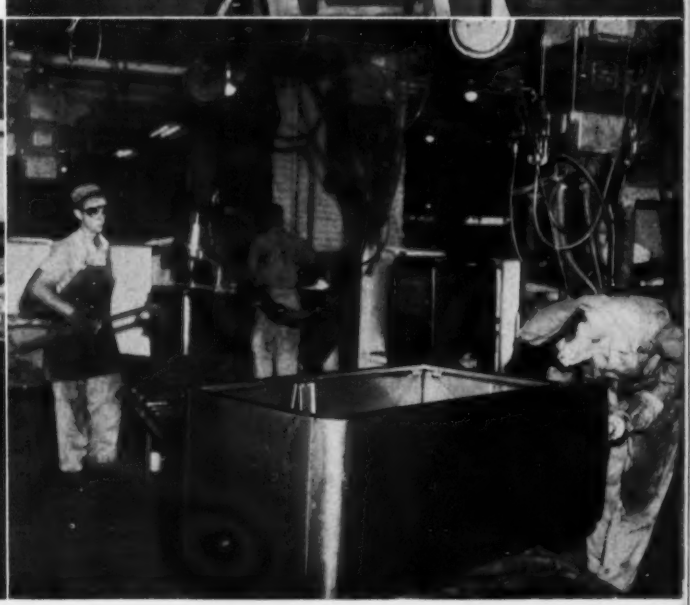
5. Above: The pieces which have been cut to specification are taken to the press section where they are formed into sides, tops, doors, etc. It may take several operations to complete a part for assembly. Shown is a part being passed from machine to machine.

6. Upper right: Smaller parts are made in punch presses as shown here. Excess steel sheared off the larger pieces during the forming operations are often utilized in making these smaller parts. These items may also involve multiple operations.

7. Right: The completed parts are moved by hand trucks to the metal assembly department. In this picture, operators are shown spotwelding the sides and tops together in a specially built machine to form the main section of the refrigerator shell.

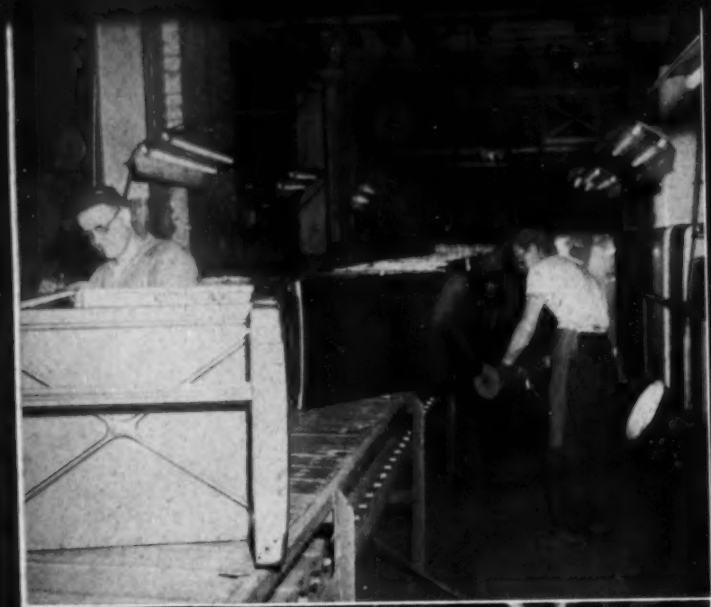


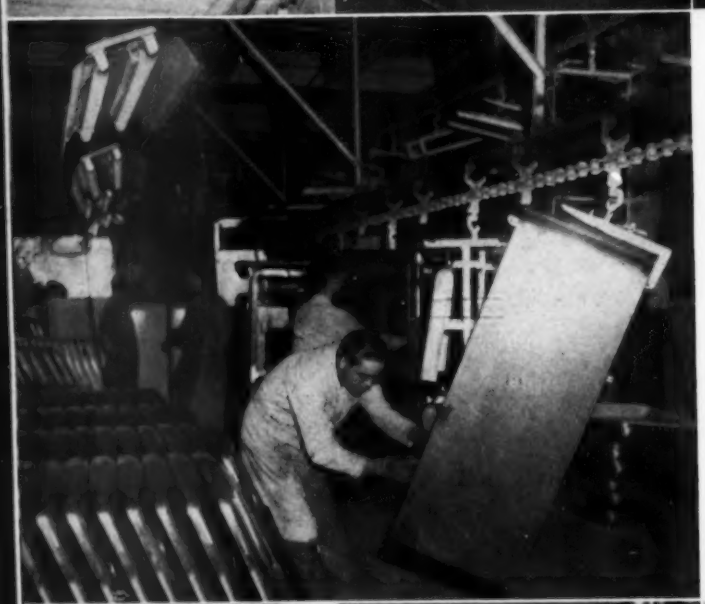




8. Above: Shell is passed to another crew of welders who add the back by spot welding. Other welders then take over to add additional parts by same method.

9. Above: Operators drill some of the holes with aid of jigs while in background another man does additional spotwelding. Shell is then nearly completed. →





10. Upper left: Here the metal finishers take over and grind off any rough spots that can be found. This is an important task which should be performed only by experienced men.

11. Above: The initial metal finishing completed, the shells are checked carefully for any flaws in the metal and marked for further work, if necessary. Those found defective are set aside.

12. Left: After the metal finishing is completed, exterior parts are loaded on a conveyor leading to organic finishing department. The parts are given a final check by inspectors. Any defective pieces are again set aside for appropriate action.

13. Above: Main interior part of refrigerator, the liner, is assembled in seam welding machine which is completely automatic after parts are in place.

14. Above: The completed liners are inspected after metal finishing is done. If found satisfactory, they are loaded on conveyor leading to porcelain department.

15. Above: The liners reach the porcelain shop and are placed in racks which are lowered into the pickling tanks. Solutions in tanks remove all oil, dirt or rust in preparation for the ground coat.

16. Upper right: Ground coat is applied to liners. They are dipped into a vat and set onto draining racks. Then they are placed on conveyor which enters continuous furnace for ground coat "firing."

17. Right: With the ground coat fused on, the liners pass along the chain to the cover coat spray booths where the white porcelain is applied to the interiors. Following this spraying operation, the refrigerator liners pass through a drying oven.

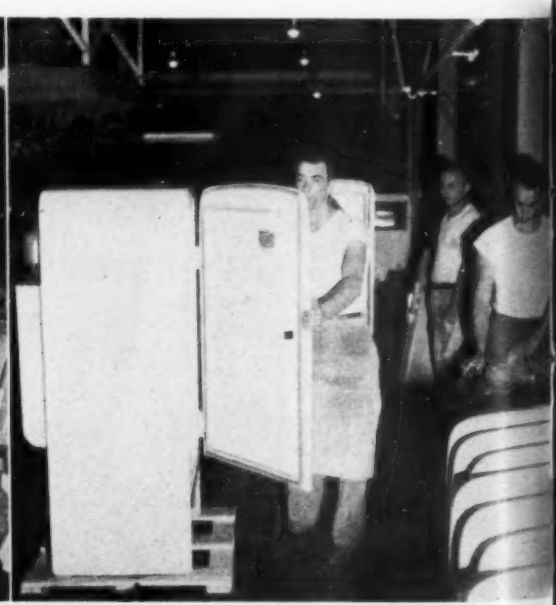
18. Above: As liners leave ovens with a firm dry coat, "strippers" remove certain portions with use of brush and scrapers for ornamental and assembly purposes.

19. Above: "Stripping" completed, liners pass into continuous furnace to fuse on the porcelain which is used because of its resistance to wear and food acids. →

20. Upper left: Following other operations such as insulating and sealing, the outer shell and the liner meet. Here a liner from the porcelain shop is placed in a shell. The liners are anchored in place and the molding is then added.

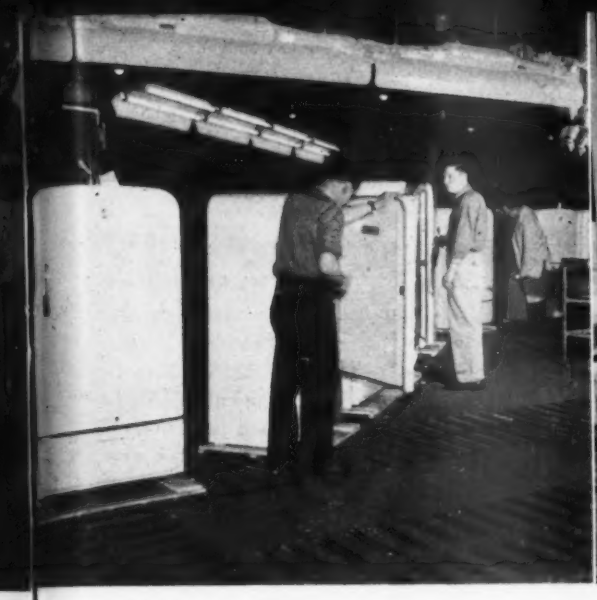
21. Above: Units are installed in the refrigerator boxes with the freezing compartment already attached to them. The units are uncrated on the floor below and delivered to the assembly line on a conveyor chain.

22. Left: This photo shows the installation of additional shelves and crisper pans. The movable parts are then padded and securely taped in place to prevent damage from occurring while the box is in transit.



23. Above: Doors are assembled here. Empty door shell starts journey at front, continues around to left while the insulation, inside panel, hinges, etc. are added.

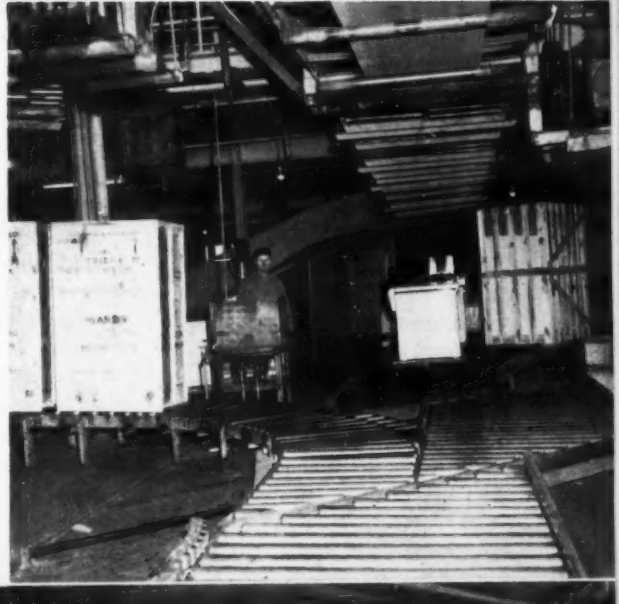
24. Above: Completed door is removed from the line and hung on the refrigerator at a nearby point. Here an operator is shown just as he puts a door in place.



25. Above: The completed box then passes through a series of rigid inspections before moving on to the craters. Any defective boxes are moved to the area shown in the foreground of the picture for correction of the faults.

26. Upper left: After the refrigerator has passed the final inspection, the craters move into action. Every precaution is taken to see that the completed article is properly padded and covered to prevent damage during transportation.

27. Right: View shows three types of products converging on conveyor to warehouse, with refrigerators at left, freezer in center, and crated commercial refrigerator on right. Operator can move conveyor to line up with product coming through.



28. Above: In warehouse, crated domestic and commercial units are separated from still incomplete freezers which are completed and crated here.

29. Above: Refrigerators are loaded into boxcars. Several times a day strings of cars pull out so units will be quickly sent out to ultimate owners.

The Washington round-up

By Wilfrid Redmond

INDUSTRY, which had been conditioned to expect the President in his message on The State of the Union to ask Congress for price and allocation powers, was unprepared, however, for the recommendation that the Government be given authority to construct production facilities for materials in short supply if private industry fails to take such action.

This development was hailed by industry and Republican members of Congress as the first step in the nationalization of U. S. industry. There are probably a number of Democratic members of Congress who feel the same way about it but are not going on record until the program comes up for consideration. There are indications that this may be soon.

Republicans who served in the 80th Congress were still trying to digest the President's proposal to put the Government in the steel business when three influential Democrats set them back on their heels with a proposal to give RFC $15 billion (not million) to provide loans to stimulate economic development in under-industrialized regions of the U. S., particularly in the West and Southwest.

Bills were introduced simultaneously in the House and Senate to set up this program, by Representative Wright Patman of Texas and Senators Sparkman of Alabama and Murray of Montana. Senator Murray is the chairman of the Senate Small Business Committee and Patman heads the House Committee on Small Business.

None of the authors of the bill claim that it is the Administration's proposal but they do say it is aimed at the objectives outlined by the President in his message.

"The full employment act"

The Murray-Sparkman-Patman bill, which has the title, "The Full Employment Act of 1950" would give RFC the authority to grant loans to existing or new private enterprises, including cooperatives, in those areas which are under-industrialized or are not making wise use of their natural resources. If the loans were not taken by private enterprise they would be offered to the state Governments for the construction of production facilities by the State. The bill provides that basic industries upon which manufacturing and other business operations depend, would be eligible for the loans.

This bill probably goes farther than the Administration proposals will go. It is understood that the Administration bill for expanded industrial capacity will be introduced by Senator O'Mahoney of Wyoming. However, the Murray-Sparkman-Patman bill may become the legislative foundation for the industrial expansion program.

The President's recommendation, in Point Eight of his economic program, calls for authority to launch an immediate study of production facilities for materials in critically short supply, such as steel; and if found necessary, to authorize Government loans for the expansion of production facilities to relieve such shortages, and furthermore to authorize the construction of such facilities directly if action by private industry fails to meet our needs.

The Steel Industry, which has been heard before Congress many times on the question of expanded facilities, maintains that demand has begun to taper off. Benjamin Fairless, president of U. S. Steel, recently told a Senate Subcommittee on Profits that there is relief in sight for steel consumers who have been unable to get production materials. The House Small Business Committee, with a Republican chairman, Representative Walter Ploeser of Missouri, in its final report to the 80th Congress, forecast, however, that steel would be shorter in 1949 because of another $50 million to be spent for steel to meet the demands of the ECA program this year.

Administration leaders so far have not answered the steel industry's contention that the main reason steel capacity cannot be increased substantially is that there are limitations on the amount of iron ore that is available for steel making.

Voluntary or mandatory allocations?

In addition to the economic expansion proposal, the President recommended, as expected, that the authority be granted for mandatory allocation controls to be used if voluntary agreements are unable to meet the problem of acute shortages. He asked for temporary extension of the voluntary allocations program but recommended mandatory powers so that they may be employed on a selective basis without delay where they prove to be needed.

In his economic report, the President outlined in detail his reasons for recommending standby price control authority. He explained that he is not asking for over-all price control of the war time variety. But we are still in a situation, he said, where the prices of certain critical materials or commodities of vital industrial or consumer importance are moving upward for the third consecutive year or longer. We cannot be sure, he said, that another upsurge of general inflation will not reappear this year under the composite pressures which are at work throughout the economy.

Selective price control

Legislation to authorize selective price control, the President added, should encourage voluntary adjustments without the actual imposition of price control.

"It is in this spirit," he said, "that I would administer the authority. But I am firmly convinced that such voluntary efforts, which have been tried with partial but insufficient results since the middle of 1946, cannot meet the problem unless the Government possesses the authority to act firmly. With such authority available, however, its actual application might not be required. It should be supplemented with a provision permitting the Government to order the withholding of price advances for a reasonable period while public inquiry into their justification is being made."

In relation to price ceilings, the

to Page 70 →

Vitreous enamels for aluminum

(continued from January, 1949, finish)

By P. J. Carlisle, MANAGER, FIELD RESEARCH SECTION • *A. J. Deyrup,* RESEARCH SUPERVISOR AND *Dr. A. O. Short* • DIRECTOR OF CERAMICS RESEARCH, E. I. DU PONT DE NEMOURS & COMPANY

Exclusive feature finish

The accelerated spalling test is considered an essential quality control and must be used without fail. Evidence to date shows that it gives the best measure in a short time of the ability of the enamels to adhere under weathering conditions. It cannot be said, however, that adequate experience has been gained to be sure that the accelerated test correlates with actual field weathering. It consists in immersing samples of finished production in 5% ammonium chloride solution at room temperature. At least 6" of interface between enamel and metal should be exposed on each piece, filing of edges to expose interface being necessary on completed enameled pieces. Test pieces should be examined at 24 hours and 96 hours. Failure is judged by loss of enamel progressing over one-eighth inch in from the edge over a one-half inch breadth. The exact amount is not critical because failure generally is very extensive or else negligible.

Frequency of testing

It is recommended that 1% of the production, selected at random, be exposed to the accelerated test. Since failure is a statistical matter, it is not adequate to test a single piece from the same lot of stock. Upon change of stock, bath, slip, firing or other conditions, prompt test is important to assure continuity of quality. In general, pieces that have been in the test bath are still shippable.

The pretreating bath should be given control tests at regular intervals and must be maintained in strength of free-alkali and of chromate. Reasonable care should be taken in control analysis to avoid error. On the other hand, highly skilled analytical technique is not required because the bath may be allowed to vary up to ± 10%. The control tests which follow have been established on a laboratory basis and are believed to be sufficient.

Free-alkali determination

Effective alkali content may be secured as follows:

(1) Measure 5 cc. of bath (filtered or settled) with a pipette into a beaker.

(2) Dilute with 100 cc. of water.

(3) Add 2 drops of 1% phenolphthalein indicator in methanol.

(4) Titrate with standard 0.1 normal (3.7%) hydrochloric acid solution.

The endpoint occurs when *precipitate starts to form in the solution without redissolving on stirring.* If the indicator red decolorizes before a precipitate forms, then this is taken as endpoint. (Generally the color change is the endpoint on fresh bath solutions, but the precipitate formation is the endpoint of used solutions regardless of the red color.)

If X cc. of hydrochloric acid is required, then the sodium hydroxide percentage is 0.066 X%. For example, if 57 cc. of 0.1 normal hydrochloric acid is required, then the percentage is 3.8%. To hold the free-alkali within the range of 3.5 to 4.1%, the titre for 5 cc. of bath should lie between 51 cc. and 63 cc. of 0.1 normal hydrochloric acid.

Chromate determination

Effective chromate content may be obtained as follows:

(1) Measure very carefully 2 cc. of filtered or settled bath by pipette into a beaker.

(2) Dilute with 100 cc. water.

(3) Add 2 grams potassium iodide, stir to dissolve.

(4) Add 25 cc. of 10% sulphuric acid.

(5) Titrate with standard 0.1 normal (1.57%) sodium thiosulphate solution until color changes from brown to faint yellowish green. Then add 2 cc. of starch indicator solution. Titrate further until the endpoint,

Trouble Shooting

Ground Coat	
Tearing	1. Sprayed too heavily 2. Overdried 3. Greasy film on metal before spraying 4. Incorrect formulation of slip
Spalling on cooling or when cover-coat sprayed	1. Under-fired 2. Incompletely washed 3. Over-treated metal
Cover Coat	
Tearing	Same as for ground coat
Pin-hole spalling (on castings)	Metal porosity
Low gloss	1. Under-firing 2. Under-milling 3. Incorrect formulation of a slip 4. Dry spray, or overspray
Accelerated test failure	1. Improper pretreatment 2. Incorrect alloy

when the deep blue starch-iodine color just disappears. In case no blue color appears when the starch solution is added, the endpoint has been overshot.

If Y cc. of thiosulphate solution is required, then the potassium chromate percentage is 0.265 Y%. For example, if the titre is 72 cc., then the potassium chromate percentage is 19.0%. To hold the potassium chromate within the range of 17 to 21%, the titre for 2 cc. of bath should be between 65 cc. and 79 cc.

Chemicals and apparatus for testing

Apparatus, chemicals (c.p.) and standard solutions may be secured from a chemical supply house. Use of distilled water in testing is not essential, but is preferred.

Starch indicator solution

Starch indicator solution can be purchased or can be made from soluble indicator starch by the following procedure: Mix 1 gram of soluble indicator starch with a little cold water to a smooth paste. Pour slowly with stirring into 200 cc. boiling distilled water. Add 6 grams boric acid, boil gently 15 minutes, allow to cool, and bottle.

Bath preparation from various sources of chromate

The pretreating bath produces its effect by definite chromate and free-alkali contents. It can therefore be made up from potassium chromate, potassium bichromate (dichromate), sodium bichromate (dichromate), or chromic acid, with appropriate adjustment of sodium hydroxide to bring the free-alkali to the right concentration. The accompanying tables have been calculated to yield the same bath for use with each form of usable chromate.

These tables are based on 100% chemicals. The bath should be analyzed after making, and corrected if necessary.

Table I

For Use with Potassium Chromate (K_2CrO_4)

	lbs. per gal. of solution	lbs. per cu. ft. of solution
Chromic sulphate	0.020	0.15
Potassium chromate	1.94	14.4
Sodium hydroxide	0.39	2.88
Water	7.67 (0.92 gal.)	58.5 (7.0 gal.)

Table II

For Use with Potassium Bichromate ($K_2Cr_2O_7$)

	lbs. per gal. of solution	lbs. per cu. ft. of solution
Chromic sulphate	0.020	0.15
Potassium bichromate	1.47	10.9
Sodium hydroxide	0.79	5.85
Water	7.92 (0.95 gal.)	59.1 (7.1 gal.)

Table III

For Use with Sodium Bichromate ($Na_2Cr_2O_7 \cdot 2H_2O$)

	lbs. per gal. of solution	lbs. per cu. ft. of solution
Chromic sulphate	0.020	0.15
Sodium bichromate	1.49	11.1
Sodium hydroxide	0.79	5.85
Water	7.9 (0.95 gal.)	58.9 (7.1 gal.)

Table IV

For Use with Chromic Acid (CrO_3)

	lbs. per gal. of solution	lbs. per cu. ft. of solution
Chromic sulphate	0.020	0.15
Chromic acid*	1.00	7.4
Sodium hydroxide	1.19	8.8
Water	8.0 (0.96 gal.)	59.7 (7.2 gal.)

*Caution in making up bath with chromic acid, due to heat of neutralization, was mentioned earlier in this article.

Table V

Free-Alkali Correction (NaOH)

Bath analysis % NaOH	Add sodium hydroxide per gal. of solution	Add sodium hydroxide per cu. ft. of solution
3.8	0.0 lbs.	0.0 lbs.
3.4	0.041 "	0.31 "
3.0	0.082 "	0.61 "
2.6	0.12 "	0.92 "
2.2	0.16 "	1.22 "
1.8	0.20 "	1.52 "

Editor's Note:

The January issue of *finish* carried an official report of general shop procedure used in the application of vitreous enamels to aluminum. This second part, by the same authors, presents factual data and tables for the aid of enamelers planning to experiment with this interesting development.

Chemical requirements

Estimated chemical requirements may be based on the tables, or on solution weight of 10 lbs. per gallon, 76 lbs. per cu. ft.

It is convenient to place the chromate and sodium hydroxide in separate places in the tank and add most of the water (cold). Chromic sulphate is dissolved in the remainder of

to Page 44 →

SUGGESTION BOX

Porcelain enameled saggers withstand prolonged furnace service

PORCELAIN enamel solved a troublesome problem at Speer Carbon Co., St. Marys, Penn., makers of delicate carbon parts.

The nature of the parts, carbon brushes, required the use of small saggers (8″ I.D. x 18″ high) as containers during the five-day firing process. Originally, the saggers used were made of 8″ I.D. steel pipe with a ¼″ thick steel plate welded on the bottom.

The saggers are packed with carbon brushes which are surrounded by sand to prevent burning of the carbon. They are placed in a cold gas-fired furnace, and the temperature is raised very slowly so that the volatile matter in the coal tar pitch binder used in the brushes will not sublimate too quickly and crack them. In five days the furnace reaches a maximum temperature of 1500-1700° F., which is held for twelve hours. The furnace atmosphere is oxidizing, with a large excess of air. Carbon dioxide and carbon monoxide are always present, and at certain times during the baking process there is also sulphur dioxide.

Under these conditions, the steel pipe saggers become scaled, blistered and unusable after not more than ten to fifteen runs. After the fourth or fifth bake the steel is very brittle from oxidation and carburization.

During Speer Carbon's search for a more economical sagger, a porcelain enameling company suggested coating the steel saggers with a highly corrosion-resistant porcelain enamel. *Result has been a consistent cost saving of 100%.* Service life of porcelain enameled saggers is from 40 to 45 bakes, as compared with 10 to 15 bakes with the plain saggers.

Editor's Note:

Long periods of exposure to high heat in an oxidizing atmosphere are typical of many processing conditions throughout industry. Many companies may find it possible to adapt this idea to specialized processing operations.

This photograph shows two saggers after 27 firings at an average temperature of 1600° F. The porcelain enameled sagger, on left, shows hardly any destruction while the plain steel sagger on the right shows well advanced blistering and scaling.

Cost savings and other related economies

In addition to cost savings through increased service life, the porcelain enameled saggers are responsible for several related economies. Welding shop man-hours formerly spent in keeping up the supply of saggers — patching up poor saggers as well as making new ones — have been considerably reduced.

The new saggers have eliminated attempts to make use of saggers with their top portions burnt off, thus increasing capacity per furnace run. Plant capacity has also been increased because there is no product loss due either to sagger failure or to sticking to sand-stuck sides of saggers. The porcelain enameled saggers are clean inside.

The final sagger-finishing method adopted by Speer Carbon was to coat the steel pipe saggers all over the outside and halfway down the inside with a heavy layer of the special porcelain enamel. The enamel normally matures at 1800° F. after 15 minutes and, since maturity is obtained in the saggers' first baking run, there is no extra processing.

SNAPSHOTS FROM HOMEFURNISHINGS

Upper left: Ward Schafer & Wm. Conley, both of Coolerator, were snapped in model kitchen display featuring firm's new electric products.

Above: A pretty model drew attention to Hotpoint's automatic water heater exhibit by showering with plenty of hot water.

Left: This model kitchen was part of Frigidaire exhibit (American Furniture Mart).

Lower left: M. Sampliner, Spear & Co., and J. M. Foxx, Moore Div. of Conlon-Moore, are shown with circulating and radiating gas heater.

Below: Julius Klein shows Caloric's all-porcelain enameled range, including porcelain enameled exterior, interior, chassis and miscellaneous parts.

(See story on market

finishfotos

INTERNATIONAL WINTER MARKET

Upper right: Norge's H. L. Clary; J. A. Cohen, Trilling & Montagne; Cy Cole, C. B. Cole Co.; and W. S. Law and M. B. Robb, both of Norge.

Above: W. B. Evans, Tennessee Enamel, shows T. J. Peters, of State Distributing Co., features of Temco all-porcelain enameled heater.

Right: In Kitchencraft exhibit (Merchandise Mart) are Mrs. D. Furgeson and Harold Burns, a distributor for Midwest Mfg. products.

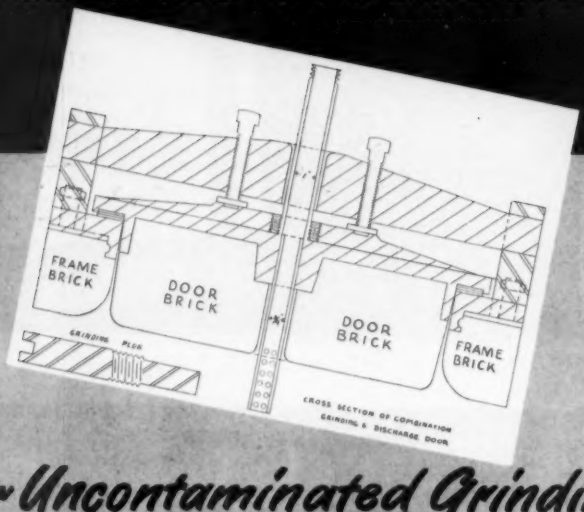
Right below: E. N. Stiglitz, Jr., of Stiglitz Furnace & Foundry, with a Warm-Aire heater.

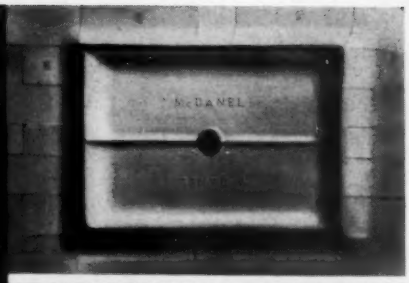
Below: Henry Butler, Samuel Stamping & Enameling, shown with Samco line of porcelain enameled gas heaters, holds porcelain enameled burner.

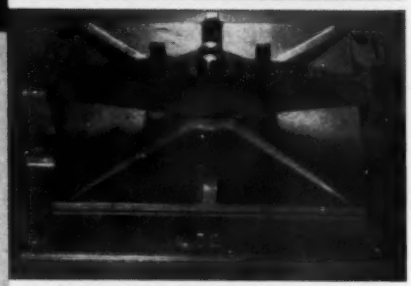
beginning on Page 19)

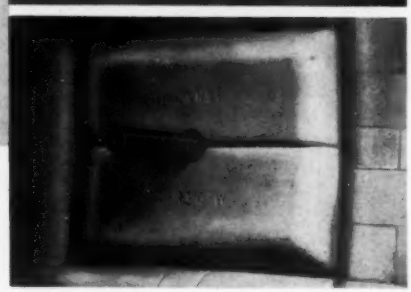
finishfotos

McDANEL
MILL HEAD ASSEMBLIES









For Uncontaminated Grinding

McDanel Mill Head Assemblies prevent contact between batch and metal from charge to tap.

Photo A shows construction from inside the mill. Simply charge mill, close mill head and insert grinding plug (Photo B). When grinding is completed, the mill door is *left in place,* which avoids dislodging partially ground material around the head. The perforated discharge plug (C) is substituted for grinding plug and the mill is quickly and easily discharged. At no time during entire operation has the batch been exposed to metal.

Specify McDanel Mill Head Assemblies from your supplier for greater uniformity of batch and longer, more satisfactory service.

*** HAND ROLLED GRINDING BALLS**

Made from specially developed vitreous porcelain body and hand rolled for faster, uniform grinding. Mill tested and individually inspected before shipment to you.

*** MILL LINING BRICK**

Low in glass content, McDanel Mill Lining Brick gives maximum resistance to wear and long, satisfactory service. Complete size range to fit every size mill.

*** MILL HEAD ASSEMBLIES**

Be sure to specify McDanel Mill Head Assemblies on your new mills. No metal can contaminate your mill charge with these patented covers. They are tops for uniformity of batch and long service.

*** METAL COVERED GRINDING JARS AND MILLS**

Protected with heavy gage steel jacket McDanel Metal Covered Grinding Jars and Mills are easy to handle, easy to clean, discharge rapidly and stand up under long usage.

WHEN ORDERING NEW MILLS OR LININGS SPECIFY
McDANEL MILL HEAD ASSEMBLIES

McDANEL Industrial PORCELAINS

McDANEL REFRACTORY PORCELAIN CO.
BEAVER FALLS, PENNA.

Chicago Vitreous Enamel Product Company
Exclusive Representative for the Enameling Industry

Seventh annual meeting

of washer and ironer manufacturers association

plan promotion of national home laundry equipment week

ACTING as a climax to three years of record-breaking sales of home laundering appliances, with 1948 volume of washers expected to total 4,400,000 units, the American Washer and Ironer Manufacturers' Association voted unanimously at its annual meeting in Chicago, January 4, at the Morrison Hotel, to stage a country-wide National Home Laundering Week, June 6-13, for the promotion of washers, dryers and ironers.

The Association voted $25,000 for promoting the June event. The individual member companies will engage independently in related promotion tieups.

Manufacturers approved two other proposals, both unanimously. They will finance a $30,000 three-year study, by the National Sanitation Foundation, of sanitation regulations, plumbing codes and washing temperatures and their relation to bacteria count.

Also to be staged this spring is a ten-day campaign, in a "guinea pig" city yet to be selected, of intensive automatic ironer selling methods. The localized promotion is planned as a test of individual ironer company retail sales plans, for extension as rapidly as possible to nationwide use.

Industry leaders expressed confidence that 1949 would be one of the largest years in its history.

Standards for volume need to be changed

"With the increase in population and our higher standards of living, and because of the development of the automatic washer, it would be fallacious to gauge our outlook of volume by prewar standards," commented H. Paul Nelligan, newly elected president of the Association. "This year of 1949 will be better than anyone expects if only we organize intelligently for it."

Immense production of home laundering appliances in the past three years, amounting to 10,200,000 washers alone, and an all-time high for 1948, was industry's challenge of consumer demand, but the tide may be turning, Nelligan warned.

The time for advertising and selling has arrived

"Now that the backlog of accumulated wartime demand has been sharply reduced by a great rush of free buying throughout the household appliance field, it is expected that competition will be much keener not only within our industry, but also against the refrigeration, home range and radio industries for the consumer's dollar. Consequently the time for vigorous promotion, intensive advertising and aggressive salesmanship has arrived. That is one reason why AWIMA already has laid plans for National Home Laundering Week. This will be a revival of an industry-wide activity which was conducted with much success for six years preceding World War II."

Roy A. Bradt, vice president of Maytag Company, and retiring president of AWIMA, said in his "farewell" address that "A larger percent-

New AWIMA Officers

President: H. Paul Nelligan, president, Easy Washing Machine Corp., Syracuse, New York.

1st Vice Pres.: C. G. Frantz, president, Apex Electrical Mfg. Co., Cleveland, Ohio.

2nd Vice Pres.: Oscar A. Lenna, president, Blackstone Corp., Jamestown, New York.

3rd Vice Pres.: W. Neal Gallagher, president, Automatic Washer Co., Newton, Ohio.

Treasurer: Howell G. Evans, vice president, Hamilton Mfg. Co., Two Rivers, Wisconsin.

President Paul Nelligan shakes with Roy Bradt, retiring president.

Two of the newly elected AWIMA vice presidents are Oscar A. Lenna, left, and C. G. Frantz. W. Neal Gallagher, the third vice president, was absent when this photograph was taken.

age of all the families of this nation are using household washers, dryers and ironers than ever before." He declared that income groups never before considered worthwhile prospects "now represent a definite and dependable market. More of this country's clothes are washed, dried and ironed at home than ever before. This is good, because it is proof that our potentiality, and therefore our future, is expanding rather than diminishing."

Economist speaks

Walter Lichtenstein, of First National Bank, Chicago, declared, as the consensus of most economists, that national income would range from $214 billion to $192 billion from 1949 to the end of 1951, with $180 billion needed to maintain full employment.

The national safe transit program discussed

A general outline of the progress of the national safe transit program, sponsored by the Packaging and Shipping Committee of the Porcelain Enamel Institute, was presented by Ralph Bisbee, of Westinghouse Electric Corporation, and Committee chairman.

E. H. Shands, of Geo. D. Roper Corporation, and chairman of the PEI Committee's technical division, then gave the technical side of the safe transit program.

Following this, A. L. Green, special representative of the Freight Claim Division, Association of American Railroads, presented figures of damage claims paid by railroads, and discussed how the railroads were cooperating with the Packaging and Shipping Committee to reduce "in transit damage."

New executive committees

The AWIMA Executive Committees consist of:

For conventional washers, Paul N. Berner, manager, home laundry equipment sales, Norge Division of Borg-Warner Corp., Detroit, and W. D. Rizor, vice president and ass't to the president, Dexter Company, Fairfield, Iowa.

For automatic washers: Parker Ericksen, general sales manager, Bendix Home Appliances, Inc., South Bend, Ind., and C. E. Anderson, manager, home laundry equipment division, General Electric Co., Bridgeport, Conn.

For dryers: F. M. Mitchell, manager, home laundry equipment division, Frigidaire Division of General Motors Corp., Dayton, Ohio, and Lloyd I. Sweetland, manager, home laundry division, Hotpoint, Inc., Chicago.

For ironers: W. R. Dabney, vice president, Ironrite Ironer Co., Mt. Clemens, Michigan, and Joseph Groshans, general sales manager, Simplex Division of Barlow & Seelig Mfg. Co., Algonquin, Illinois.

All but C. E. Anderson and F. M. Mitchell are newly elected to the executive committee.

O. L. Earl, vice president of Acme Aluminum Foundry Company, Chicago, was elected president of the AWIMA Associates Group at the annual meeting.

National home laundering conference

HOME laundering authorities from a half-dozen areas of endeavor, including makers of household washers, dryers and ironers, representatives of women's magazines, educational groups, the national government, the city of Chicago, gas and electric utilities, and leaders in the water heater, soap and synthetic detergents fields, conferred in Chicago, on January 3rd and 5th, at the Morrison Hotel.

Nearly 100 persons took part in four sessions during which detergents, water supply and softening, bluing and starching were discussed in relation to the most satisfactory use of household laundering appliances. Attention was also given to engineering, wiring, plumbing and other installation features.

The second national home laundering conference as staged under the auspices of the American Washer and Ironer Manufacturers' Association. Roy A. Bradt, in his final day as Association head, addressed the conference and praised the participants for their cooperation on problems of common interest.

Summarizing the conference as the final speaker at the closing session, Miss Elizabeth Sweeney, household equipment editor for *McCall's*, declared that great progress had been made in establishing good working relations among all the interests involved, and expressed optimism over the outlook for making the conferences of increasing value to the participants. She proposed that standing committees be set up to continue deliberations and progress reports between the conferences, which are to be held semi-annually.

SNAPSHOTS OF AWIMA MEMBERS

Top row, left: R. P. James and J. S. Morris, both of Barlow & Seelig.

Top row, right: Oscar A. Lenna and J. M. Wicht, both of Blackstone Corp.

Second row, left: H. G. Evans, Hamilton Mfg., newly elected AWIMA treasurer.

Second row, right: R. H. Thompson, Maytag Co., chairman of AWIMA traffic committee.

Third row, left: Neal Gallagher, Automatic Washer, new vice president of AWIMA.

Third row, right: A. H. Noelke, secretary of the Association.

Below: Speakers' table at recent AWIMA annual meeting at the Morrison Hotel.

finishfotos

Time-Proved for Economy

SOUND research, in-the-plant testing and laboratory checking at every phase of production *time-proves* all Century Frits. Each type of frit, whether for ground or cover coat, is checked in this manner to insure you complete satisfaction. Century's plant and laboratory experts take pride in their record of producing fine, time-proved frits for over 20 years.

This constant alertness means profits for you in fast, economical enameling operations . . . profits resulting from speed, fewer rejects, and neater overall appearance. You'll find it will pay to check Century frit in your plant. Write for a trial run today.

Enameling Job Orders

We have additional space in our plant at present for large or small job orders. Write or phone us today for complete information.

CENTURY VITREOUS ENAMEL CO.,
6641-61 S. Narragansett Ave., Chicago 38, Ill.

FRIT from CENTURY
FRIT MASTERS

Production of enameled display letters

(Continued from Page 24)

Our present products include straight Gothic letters, as large as 15", and bold Roman round faced letters in 10" and 12" sizes. The letters are equipped with either eyeletted holes, keyhole brackets, or stud bolts as required. Keyhole brackets and stud bolts are securely welded to the letters before enameling.

We furnish porcelain enamel letters finished in any of the standard colors such as white, black, light blue, dark blue, light green, dark green, yellow, orange, red, maroon, and cream.

Although we have had to use cold rolled steel stock, auto body stock and whatever steel supplies that are available, we have been able to produce high grade finishes for our products, and, like everyone else, we are looking forward to the day when we can secure sufficient enameling steel to supply our needs.

Good business ahead for those who SELL

(Continued from Page 22)

vities which will provide the information to assist in development of sound policies and merchandising plans at national and local levels. Product planning will involve the "where, what, how and cost" of specific product sales campaigns, as well as working closely with distribution toward a budgeted objective.

Advertising budgets will be expanded to maintain company competitive positions in the industry. More emphasis will be placed on reaching the consumer through prominent national magazines. As the same time, retailers will be encouraged to tie-in with national programs through local newspapers and radio advertising.

Timing of significance

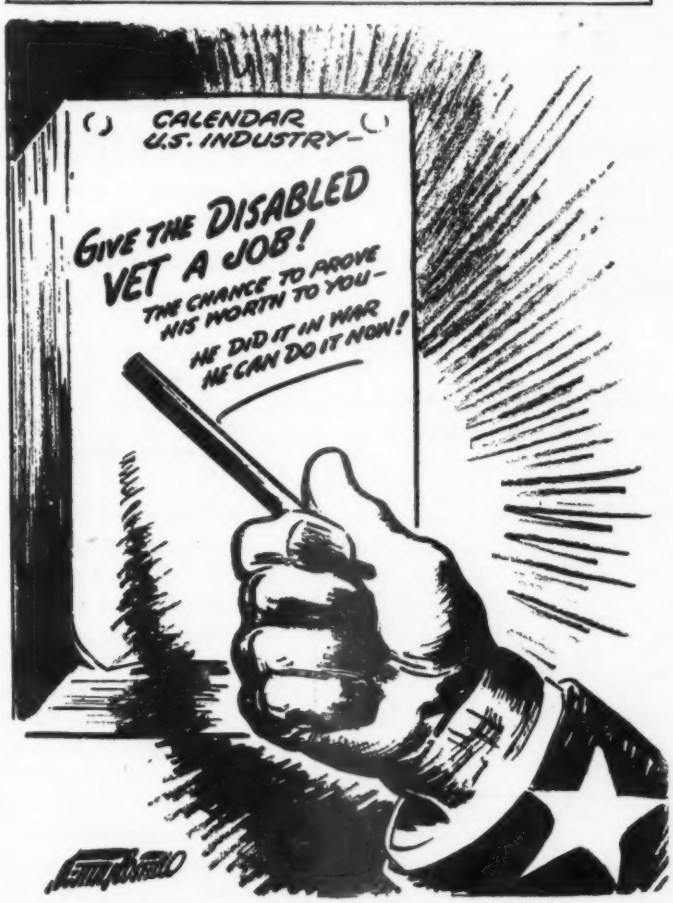
Timing will be a significant element in promotion programs, particularly with the return to the normal pattern of seasonal buying. In the area of distribution and retail selling, manufacturers will continue sales training programs aimed at developing close coordination among factory, distributor and retail outlet. Growing competition probably will be accompanied by a shrinkage in the number of appliance dealers.

Product service departments have had a spectacular growth to match expansion of production facilities. Leading manufacturers recognize their responsibility in providing efficient service facilities through distributors and retailers.

Another record year due

Another record year for the appliance industry is probable in 1949. However, the return of normal conditions within the industry means the return to fundamental selling if a high sales level is to be maintained. The sales are still there but every retailer will have to work harder to get them.

DAV Cartoon of the Year



Dramatic cartoon by Jerry Costello titled "Memo For Today" urging employment of disabled war veterans is declared best in 1948 national competition sponsored by Disabled American Veterans among editorial newspaper cartoonists. Costello is with the Albany (NY) Knickerbocker News and his cartoons are distributed by the General Features Corporation of New York City. The prize winning cartoon appeared in many newspapers on the date of original release.

Vitreous enamels for aluminum

(Continued from Page 34)

the water and the solutions mixed. The procedure of putting the dry chromate and sodium hydroxide in the tank at the same time *should never be used with chromic acid.* Chromic acid and sodium hydroxide evolve a lot of heat, sufficient to cause violent boiling. When chromic acid is used, the sodium hydroxide is dissolved first in most of the water (cold) and the chromic acid added slowly with due care to avoid splashing.

Table VI

Chromate Correction with Potassium Chromate

Bath analysis of % K_2CrO_4 equivalent	Add per gal. of solution potassium chromate	Add per cu. ft. of solution potassium chromate
19.0	0.0 lbs.	0.0 lbs.
17.0	0.20 "	1.5 "
15.0	0.41 "	3.0 "
13.0	0.61 "	4.6 "
11.0	0.82 "	6.1 "
9.0	1.02 "	7.6 "

Table VII

Chromate Correction with Potassium Bichromate

Bath analysis % K_2CrO_4	Add per gallon of solution: potassium bichromate	Add per gallon of solution: sodium hydroxide	Add per cu. ft. of solution: potassium bichromate	Add per cu. ft. of solution: sodium hydroxide
19.0	0.0 lbs.	0.0 lbs.	0.0 lbs.	0.0 lbs.
17.0	0.15 "	0.04 "	1.1 "	0.3 "
15.0	0.31 "	0.08 "	2.3 "	0.6 "
13.0	0.46 "	0.13 "	3.5 "	1.0 "
11.0	0.61 "	0.17 "	4.6 "	1.3 "
9.0	0.77 "	0.21 "	5.8 "	1.6 "

Table VIII

Chromate Correction with Sodium Bichromate

Bath analysis % K_2CrO_4	Add per gallon of solution: sodium bichromate	Add per gallon of solution: sodium hydroxide	Add per cu. ft. of solution: sodium bichromate	Add per cu. ft. of solution: sodium hydroxide
19.0	0.0 lbs.	0.0 lbs.	0.0 lbs.	0.0 lbs.
17.0	0.15 "	0.04 "	1.2 "	0.3 "
15.0	0.31 "	0.08 "	2.3 "	0.6 "
13.0	0.47 "	0.13 "	3.5 "	1.0 "
11.0	0.62 "	0.17 "	4.7 "	1.3 "
9.0	0.78 "	0.21 "	5.8 "	1.6 "

Table IX

Chromate Correction with Chromic Acid

Bath analysis % K_2CrO_4	Add per gallon of solution: chromic acid	Add per gallon of solution: sodium hydroxide	Add per cu. ft. of solution: chromic acid	Add per cu. ft. of solution: sodium hydroxide
19.0	0.0 lbs.	0.0 lbs.	0.0 lbs.	0.0 lbs.
17.0	0.10 "	0.08 "	0.8 "	0.6 "
15.0	0.21 "	0.17 "	1.6 "	1.2 "
13.0	0.31 "	0.25 "	2.4 "	1.9 "
11.0	0.42 "	0.33 "	3.1 "	2.5 "
9.0	0.52 "	0.42 "	3.9 "	3.1 "

Bath corrections, including various sources of chromate

The chromate and free-alkali should be held within plus or minus one-tenth of their standard values.

If the bath should be too concentrated in either chromate or free-alkali, it should be diluted proportionately.

If the bath should be too low in free-alkali, it should be corrected (Table V).

If the bath should be too low in potassium chromate equivalent, it may be corrected with potassium chromate, potassium bichromate, sodium bichromate, or chromic acid (Tables VI, VII, VIII, and IX). Since the last three are acidic materials, Tables VII, VIII, and IX include sufficient sodium hydroxide to neutralize them.

In general, correction involves analysis first, followed by addition of sodium hydroxide (as indicated in Table V) together with chromate and additional sodium hydroxide (as indicated in one of the other tables.)

Typical color coat formulas

A few typical approximate formulas (excluding water) of a number of colors follow. All of the formulas are based on the use of our standard pigments. In other words, these are merely typical color formulas, not matching any color in particular. The ingredients are given in parts by weight.

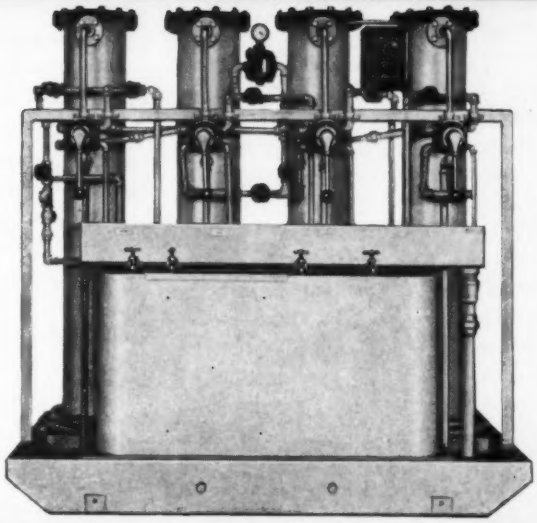
Typical White	
Frit L-388	100
TiO_2	9
Mill addition agent L-389	7.5
Typical Black	
Frit N-390	100
8291E	5
Mill addition agent L-389	7.5
Typical Orange	
Frit (cadmium) N-845	100
W-325	4.7
Mill addition agent L-389	7.5
Typical Green	
Frit N-390	100
844E	1.1
2071E	2.1
TiO_2	1.1
Mill addition agent L-389	7.5
Typical Yellow	
Frit N-845	100
Y789	4.7
Mill addition agent L-389	7.5

For

Mill Room ASSURANCE That the "SLIP" is Always RIGHT

INDUSTRIAL'S NEW ION EX DEMINERALIZERS

These ion-exchange demineralizers deliver the chemical equivalent of distilled water by simply passing water through ion-exchange resins. All dissolved mineral salts are removed without the use of any stills, heat, or steam. No cooling water is required and there are no scale formations. And the cost of this demineralized water is only a few cents per 1000 gallons compared to the several dollars for distilled water or steam condensate.



Model L-200 Four-Bed Industrial Water Demineralizer for a nominal flow rate of 200 gph. Other standard models available with capacities of 5 to 1000 gph. Special units of any capacity engineered to requirements.

For

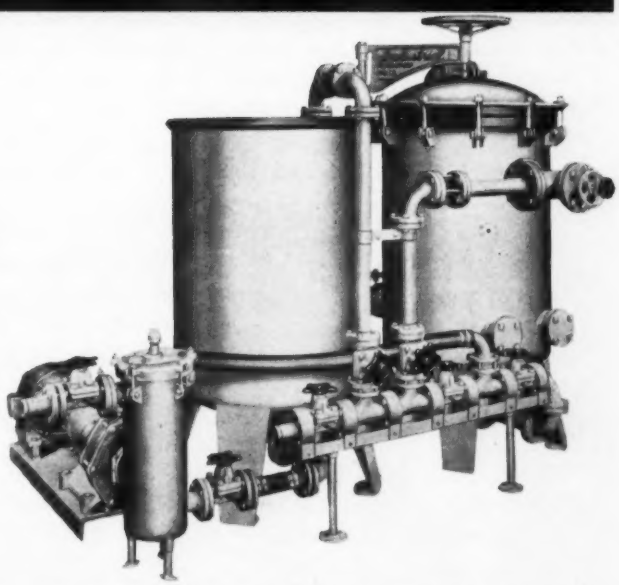
Dependable Results in Solution Clarification

INDUSTRIAL'S FILTERS AND FILTERING SYSTEMS

In production filtration here are some points to check. Compare these construction and operating features of Industrial's filters.

Industrial's filters are conservatively rated on capacity. Compare the filtration area, the sludge holding capacity of the filter chamber, and the pump characteristics. All these factors govern the capacity of the filtering system. The filter cloths in connection with filter aids provide efficient, low-cost filtration in either continuous or intermittent service.

The air wash cleaning feature does not require any dismantling of the filter or removal of the cover. Industrial's filters have operated for months without opening—opening is required only for replacing filter cloths or for periodic inspection. This feature is a great time and labor saver.



A typical Industrial Stationary Filter System. Standard models—portable and stationary types—are available in capacities of 100 to 15,000 gph. Special filters are engineered to meet unusual requirements.

★ *Write for full information and recommendations*

INDUSTRIAL FILTER & PUMP MFG. CO.

1627 West Carroll Avenue • Chicago 12, Ill.

FILTERS
Pressure Type

PUMPS
Centrifugal

CORROSION TESTING APPARATUS
Salt Fog
Humidity

RUBBER DIVISION
Vulcanized Linings • Molded Products

ION EX DEMINERALIZERS

→ *from Page 25*

reduced losses and, in many cases, reduced overall PACKAGED PRODUCT cost.

One of the first to get the program before its membership was GAMA, represented by Harold Massey. Leigh Whitelaw, managing director of GAMA, reported during the ICHAM meeting in Cincinnati that approval ballots were already coming in at that time from individual members.

Sanitary ware group joins

Word comes to *finish* that the Enameled Cast Iron Plumbing Fixtures Association, Washington, D.C., and represented by I. J. Fairchild, has accepted an invitation to join the other interested groups.

Reports due in

It is expected by the time this issue of *finish* goes to press the initial reports of the various association representatives will have been forwarded to the Coordinating Committee giving the names of individual manufacturers who have indicated their willingness to participate in the "safe transit" program. This means that within a comparatively few weeks these manufacturers will be in position to judge the early effect of the "pre-shipment testing."

Results to be charted

The carriers will furnish loss and damage figures to the PEI Coordinating Committee which will be charted for succeeding months. In this way, a true picture of the results to individual manufacturers and all participating industries will be available during the coming months.

Project I-A

After Project I (packages 100 pounds and over) is well under way, Project I-A (packages 5 pounds to 100 pounds) will be accelerated. Project I-A is being developed at present by the Technical Committee and under the immediate leadership of Professor F. A. Petersen, University of Illinois. Professor Petersen is also Industry Committee representative for the Enameled Utensil Manufacturers Council.

More interesting letters about the

The Strong Manufacturing Company

To P.E.I.

I have your bulletin dated December 15 regarding packaging and shipping, also, all circulars pertaining to what has transpired to date and the program to reduce shipping damage.

We heartily endorse your program and feel it is a step in the direction, not only to reduce freight claims, but also damaged ware.

To date, your program has been with the heavy enameling industry such as stoves, washing machines, refrigerators and so forth. Our plant manufactures the small enameled parts for the refrigerating trade and also parts for the lighting industry such as fluorescents, incandescents and street lights. . . .

The tremendous task and the results to date are remarkable and we feel that a vote of thanks should be given to the Committee and to Mr. Bisbee for the splendid job that they have done.

W. H. Metz
Executive Vice-President

Chicago, Milwaukee, St. Paul and Pacific Railroad Company

To Finish:

This will acknowledge receipt of your letter of January 10th, enclosing a copy of the January issue of "Finish."

I was most interested in the National "Safe Transit" Program, as I realize the results are going to be far reaching and should be of great assistance in the nation-wide loss prevention program which has been sponsored these past few years by the various Regional Advisory Boards in co-operation with the Association of American Railroads, the Railway Express Agency and others.

Needless to say, we on the Milwaukee Road are cognizant of the seriousness of the situation and are waging a constant campaign in the interest of better shipping.

C. H. Buford
President

Official Classification Committee

To Finish:

I have your letter of January 10, regarding the Industry Cooperative Plan for reducing shipping losses on enamelware and allied appliances, also the January issue of FINISH outlining this program.

The Classification Committees are charged with the responsibility of prescribing packing specifications for articles moving in freight transportation, and we are very much interested in any cooperative program to improve shipping containers and interior packing.

Damage to enameled products including refrigerators and allied articles has been a cause of much concern, and we are certainly pleased to know of the industry's efforts to carry on tests to determine the causes.

If we can be of assistance, please do not hesitate to call on us.

A. H. Greenly
Chairman

Perfect Shipping

To Dana Chase:

I was greatly appreciative for your courtesy in sending me a copy of January FINISH, in which you published a comprehensive report of the industries-wide program which is being sponsored by the Porcelain Enamel Institute for better packaging and loading protection for household appliances.

May I add my sincere commendation to the favorable reaction of transportation and industrial representa-

ut the National SAFE TRANSIT Program

tives upon the effective manner in which you are supporting this much-needed program.

The losses sustained by shippers and dealers which are not recoverable from the transportation agencies no doubt run well beyond the $7 million figure, which you state may be the extent of railroad claim losses for the year 1948. Even if they are running that high, it must be apparent to all that this high loss and damage tax must be paid out of earnings — as are all operating costs — and from that angle alone, I haven't the slightest doubt but that the program will make a strong appeal to those who are footing the freight bills.

I am especially pleased that this matter has been brought to my attention, and I shall see that appropriate suggestions are made to all transportation agencies to give better attention to the safe transportation of these products during the course of the National Perfect Shipping Campaign.

I have been told that this program is really your "brain child" and I congratulate you upon your vision and good sense.

I. M. Peters
General Chairman
National Management Committee

Wirebound Box Manufacturers Association

To Finish:

I have your letter of January 4, and I have received a copy of the January edition of FINISH. I have read completely the article you referred to, and I congratulate you on the very intelligent presentation you have made of the National Safe Transit Program. It gives me a very good understanding of how it is organized and I am looking forward to opportunities for our organization to participate in it.

L. S. Beale
Secretary

American Trucking Associations, Inc.

To Finish:

Thank you for your letter of January 3 advising that you were supplying a copy of the January 1949 issue of "Finish" and calling attention to the "Safe Transit" program in that issue.

I cannot say too much in praise of both the December and January issues of "Finish" as to the manner

National Electric Sign Association representatives met at the Sherman Hotel, Chicago, to discuss the Safe Transit Program. Shown in the photo are, left to right — Front Row: J. C. Van Nordstrand, Railway Express Agency; C. M. Lockwood, Kolux Corporation; John Seniw, Federal Enterprises, Inc.; M. R. Ely, NESA; A. E. Rebol, Acme-Wiley Corp.; Walter Judy, Bellows Electric Sign Corp. Back row: E. D. Lamdin, Walker & Co.; B. J. Schneider, Philadelphia Sign Co.; A. J. Orfait, Railway Express Agency; W. J. Balster, The Don L. Quinn Co.; Dana Chase, finish; Walter Freel, Neon Products, Inc.

finishfoto

in which you have publicized this industry-wide movement to minimize damage to porcelain enamel products.

This movement on the part of the Porcelain Enamel Institute is unique in trade association work, and the understanding enthusiasm with which it is being received by manufacturers is certainly due, in a large measure, to the splendid publicity afforded by your publication.

Please be assured of our continued interest and cooperation.

Wm. L. Yingling
Member

Florida All-Bound Box Company, Inc.

To Finish:

Your program to better packaging is very interesting and should prove profitable to most manufacturers of shipping containers. . . .

We are very much interested in improved methods and feel sure you will accomplish something worthwhile.

W. E. Bobo
General Manager

L.A.B. Corporation

To Finish:

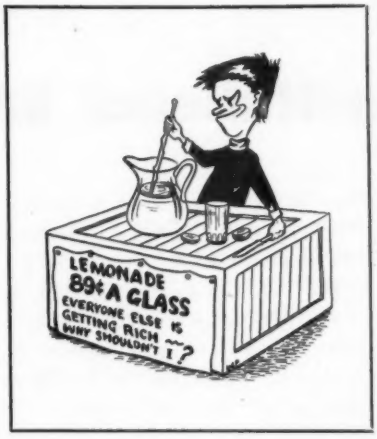
The January number of "Finish" has just come to my attention. You certainly have done a swell job in setting up the P.E.I. Safe Transit Program. . . .

It is probable that your original idea and activation of it by P.E.I., under Ralph Bisbee's fine leadership . . . has taken root and I believe it now has momentum that cannot be stopped. Your continuous plugging in every issue of "Finish" will keep it growing.

Mr. L. H. Cargill of Packing Service Corporation was just in my office, and we had a very interesting discussion of their proposal to establish regional laboratories for the service of those shippers who do not want to establish their own laboratories. . . .

With personal regards and best wishes for 1949, we remain

H. Geo. D. Nutting
Vice President



"I distinctly heard him say, 'I will . . . . for the duration of the steel shortage'."

Editor's Note:

One point needs clarification in connection with the various high figures on damage claims which have been reported on "porcelain enameled" products in connection with the *finish*-projected and PEI-coordinated "Safe Transit" program. A clearer designation of the products being covered in this program would be "*major appliances and allied metal products.*"

All products such as stoves, ranges, heaters, refrigerators, washing machines, dryers, signs, table tops, kitchen ware, sanitary ware, etc., form a part of the present program. In many instances, such as the current refrigerator models, for instance, porcelain enamel forms only a small part of the total product — usually the *interior* liner.

It will be obvious, therefore, that a "safe transit" program on finished PACKAGED PRODUCTS is for protection of the complete unit and not just the porcelain enameled components.

For the producer of organic finishes, plastics or any material competing with porcelain enameled metal, we suggest consideration of this fact before assuming that the enormous damage claims reported for "porcelain enameled" products represent the porcelain enameled parts only.

AROUND THE WORLD

Rotospraying... is the ACCEPTED WAY of SIEVING

Rotospray is the equipment used in the mill room of Frigidaire Products of Canada Limited, Leaside, Ontario, Canada.

Yes . . . Rotospraying, the modern method of sieving enamel slip, is being used in porcelain enameling plants around the world.

In the United States, the Rotospray has long since become the standard equipment for the efficient and economical sieving of porcelain enamel slip.

And in other countries the world around, Rotosprays now give the same dependable service day in and day out.

To be sure you get the right Rotospray for your job, contact Rotospray direct . . . or one of our sales representatives.

ROTOSPRAY
(Reg. U. S. Pat. Off.)
"Worth waiting for"

Sales representatives —
B. F. DRAKENFELD & CO., INC., New York, N.Y.
PEMCO CORPORATION, Baltimore, Md.
O. HOMMEL COMPANY, Pittsburgh, Pa.
FERRO ENAMEL CORP., Cleveland, Ohio and foreign offices
CHICAGO VITREOUS ENAMEL PRODUCT CO., Cicero, Ill.
BRAUN CORPORATION, Los Angeles, Cal.
BRAUN KNECHT & HEIMANN CO., San Francisco, Cal.

Foreign representatives —
WATFORD ENGINEERING WORKS, Watford, England
ELOF HANSSON, Gothenburg, Sweden

ROTOSPRAYS ARE ALSO USED EFFECTIVELY IN CHEMICAL PLANTS, PAPER MILLS, AND POTTERIES

ROTOSPRAY MANUFACTURING COMPANY
562 WASHINGTON BOULEVARD • CHICAGO 6, ILLINOIS • TEL. DEarborn 2-7196

THIS DEVILBISS MBC GUN

Has 7 Wear Resistant Points that Save You Money

SPECIALLY DESIGNED AND BUILT FOR THE CERAMIC INDUSTRY

Years of *direct factory contact* with the porcelain enameling and ceramic industries have given DeVilbiss engineers a wide experience in designing the correct spray gun for every spray application.

In the MBC 526 Spray Gun for example, all 7 vital wear points are constructed of special metal to resist rust, corrosion and abrasive wear.

This same lasting protection—and all the qualities that mean higher finishing efficiency—are incorporated in the complete DeVilbiss Ceramic line—from spray guns to booths. Your DeVilbiss engineer will gladly show you how these features increase production, improve product quality and lower operating costs.

1. Tough Alumilite Finish on entire Spray Gun.
2. Hardened steel bushings for trigger.
3. Removable hanger hook of nickel-plated bronze.
4. Fluid needle and tip of Carboloy.
5. Stainless steel fluid needle packing box.
6. Hardened inserts at trigger and needle contact points.
7. Extra-heavy chromium plate on trigger.

THE DEVILBISS COMPANY • Toledo 1, Ohio

Canadian Plant: WINDSOR, ONTARIO

DE VILBISS means Quality in all four..

DE V

SPRAY EQUIPMENT
EXHAUST SYSTEMS
AIR COMPRESSORS
HOSE & CONNECTIONS

NEWS

Robert Galbraith dies

Robert Galbraith, ceramics sales representative in Cleveland, Ohio, for the Electrochemicals Department of E. I. du Pont de Nemours & Co., died December 24. He had been with the du Pont company since 1933.

A graduate of the University of Illinois in 1923, Galbraith was associated with American Terra Cotta Company and the Harshaw Chemical Company before he joined the du Pont organization. He was a member of Keramos, the Institute of Ceramic Engineers, and the American Ceramic Society.

Crowley-Thompson succeeds Ferro Chemical Corp.

Crowley-Thompson Chemical Co., Cleveland, Ohio, has purchased the Chemical Division of Ferro Chemical Corporation, according to Frank J. Crowley, president. P. L. "Phil" Thompson is vice president of the firm which is located at Lederer Terminal, Foot of East Ninth Street, Cleveland 14, Ohio.

ASTE 17th annual meeting in Pittsburgh, March 10-12

The American Society of Tool Engineers' 17th Annual Meeting will be held March 10, 11 and 12, in Pittsburgh, Penn., according to an announcement by Irwin F. Holland, ASTE president.

Tool engineers from throughout this country and Canada will meet in the Hotel William Penn for a series of technical sessions on new developments and problems in the tool engineering and related fields, it was stated.

Cameron returns to Norge

J. R. "Jack" Cameron, who has been in the appliance business since 1922, has returned to the Norge Division of Borg-Warner Corp. as assistant to Harry L. Spencer, director of manufacturing, it was announced by Howard E. Blood, president and general manager.

Cameron first joined Norge in 1927. He returned to the company after spending four years as manufacturer's agent handling industrial products in the Detroit area. When he left Norge in December, 1944, he was manager of national service on all products, including refrigerators, commercial units, gas and electric ranges, washing machines and home heaters. He had held that position since 1933. Prior to that time he had been assistant manager of national service and national service representative in the field.

Winter exhibits art enamels

H. Edward Winter, internationally known enamelist, exhibited his most recent porcelain enamel murals in a one-man show at the Denver (Colorado) Art Museum in January. Immediately following the Denver show, Winter's productions were scheduled for exhibition at Hamline University, St. Paul, Minn. The exhibits include 14 enameled steel and copper murals.

One of the country's leading proponents of porcelain enamel art, Winter was awarded the 1948 Charles Fergus Binn's medal awarded by the American Ceramic Society for distinguished work in the field of American ceramics.

New officers at Crown Stove

The board of directors of Crown Stove Works recently announced the election of the following officers: president, Walter F. Rogers, Jr.; vice president-treasurer, John J. Collins; vice president in charge of sales, John C. Rogers; vice president in charge of production, Charles J. Rogers, Jr.; and secretary, Mrs. Mary R. Collins. Joseph J. Bates was appointed general sales manager.

Charles J. Rogers is vice chairman of the board for Crown Stove, and Walter F. Rogers is chairman of the board.

Pennsalt organizes subsidiary to handle foreign activities

Leonard T. Beale, president of Pennsylvania Salt Manufacturing Company has announced the organization of Pennsalt International Corporation, a subsidiary, which will take over the foreign interests of the parent firm.

Richard L. Davies is president of the new firm and John H. S. Barr is vice president. Davies is assistant to the president of the parent company for which Barr has been export manager since 1944.

The new company will import and

export chemicals and raw materials. In addition it will perform a service to American and foreign industry in the exchange of technical information relating to chemical processes. It will handle imports for the parent company, which has been a heavy importer of raw materials for its own chemical production for nearly a century, it was stated.

Twenty-five year old "Enamelist" to go quarterly

Finish has learned from the The Enamelist Publishing Company that the publication *The Enamelist* will, beginning with the "Spring, 1949" issue, be published on a quarterly basis. *The Enamelist* needs no description to the majority of *finish* readers, for during the past twenty-five years it has been distributed to plant men and executives throughout the porcelain enameling industry as a free publication disseminating technical data, plant information and pertinent news.

According to the report, the January, 1949, issue will be the last in its present form as a pocket-size publication carrying commercial advertising. Editorial material, included with the report, which will have appeared in the January issue of *The Enamelist* states in part:

"This issue of *The Enamelist* marks its final appearance as a monthly publication. Beginning with the "Spring, 1949" number, it will appear quarterly as a journal devoted almost entirely to technical papers and articles treating of problems and practices in the Porcelain enamel and allied industries.

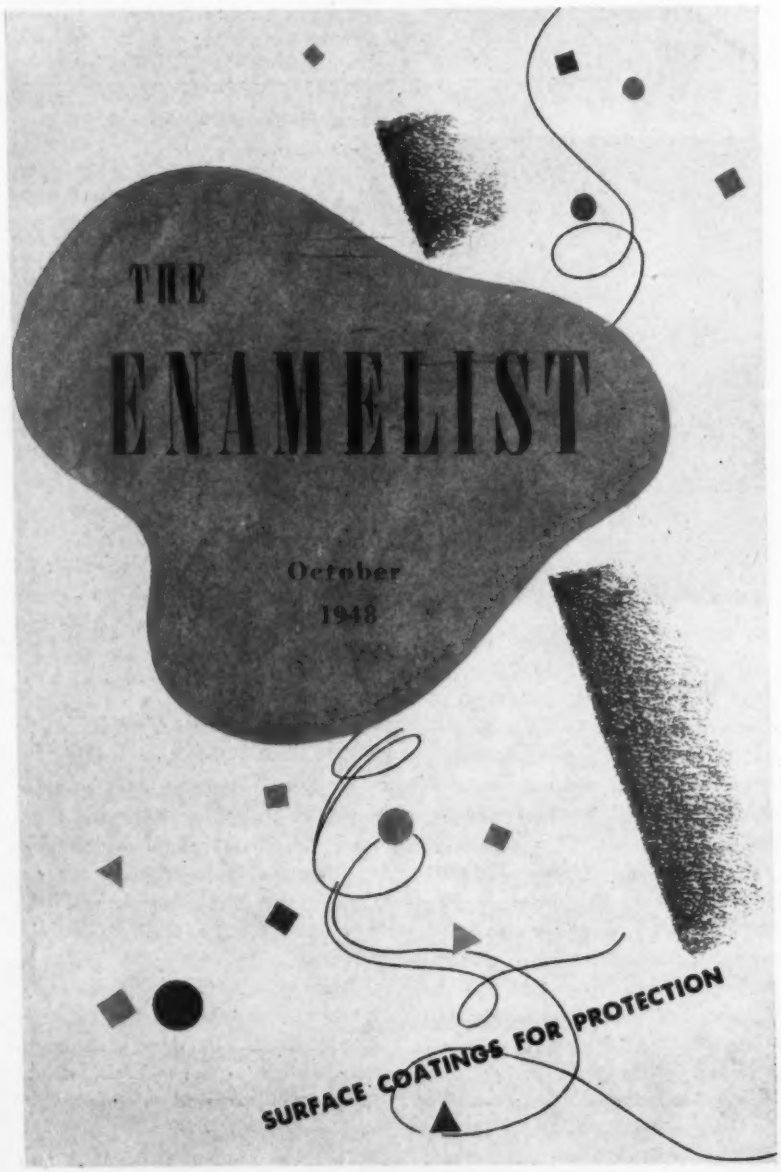
"Our decision to effect this change is based on careful consideration of periodic ceramic literature as it exists today. During its twenty-five years of existence *The Enamelist* has endeavored, with what we trust has been a fair degree of success, to present each month a balanced survey of current technical and economic developments, plant design, industrial news and personality notes. A sustained effort has been made to bring to the reader's attention all phases and problems of the industry, with the object of encouraging increasingly higher standards for Porcelain enameled products."

In *The Enamelist's* first editorial dated October, 1923, it was stated: "There is no other magazine in the field exclusively devoted to this industry and we, therefore, feel this little magazine will occupy a niche which has been conspicuously vacant."

The editorial concerning the new "quarterly" publication states: "This niche, however, is no longer vacant. . ."

The editorial policy of the new "quarterly" which is to appear with completely new format, is indicated to include ". . . fuller consideration of significant technical problems, developments, literature and patents which are of current interest and benefit to members of the industry."

It would seem that the trade publications now actively serving the ceramic industry, and *finish*, in its service to the major appliance and allied metal products fields, should consider the change in policy of *The Enamelist* a distinct compliment to the adequacy of service currently rendered to readers throughout their respective fields.



Appoints eastern representative

Continental Industrial Engineers, Inc., 176 W. Adams St., Chicago, engineers, designers, and manufacturers of complete industrial plants, special machines and production lines, furnaces, ovens, dryers and gas atmosphere generators for the metalworking and finishing industries, has appointed the R. W. Richards Company, Ridgewood, N.J., as its eastern representative.

New commercial standard sets up tests, specifications, and sizes for enameled cast iron plumbing fixtures

A second edition of "Enameled Cast-Iron Plumbing Fixtures — Commercial Standard CS77-48" was issued recently by the National Bureau of Standards, U.S. Department of Commerce, Washington, D. C.

This standard establishes minimum standard specifications for enameled cast iron plumbing fixtures, definitions, and inspection rules. Standard types and sizes for staple enameled cast iron plumbing fixtures are also established. Methods of testing for both acid-resisting and regular enameled cast iron plumbing fixtures are described for the information and guidance of manufacturers, distributors, and users of these products.

The second edition of Commercial Standard CS77-48 is said to represent more than two years of coordinated effort on the part of both members and non-members of the Enameled Cast Iron Plumbing Fixtures Association, the National Bureau of Standards, and members of the Standing Committee which included distributors, the National Association of Master Plumbers, the American Institute of Architects, and the National Association of Purchasing Agents. A. G. Zibell, of Kohler Company, Kohler, Wis., is chairman of the committee.

The standard types and sizes of the various fixtures set up in the rules are those which the entire industry regards as standard and which are available from several and, in many instances, from all of the manufacturers.

Among the styles and types of enameled cast iron plumbing fixtures covered by the new commercial standard are baths, lavatories, sinks, laundry trays, and drinking fountains.

Requirements outlined in the new commercial standard include material, thickness, warpage, enameling, acid-resistance, inspection rules, and marking.

In addition to white, four basic colors are recognized as standard; namely, green, blue, ivory, and peach-brown. The exact color furnished is determined by each manufacturer in accordance with his individual production problems.

Plumbing fixtures conforming to this standard, it was pointed out, may bear a sticker or other label containing the following wording:

"The manufacturer declares that this enameled cast iron fixture complies with all the requirements and tests of Commercial Standard CS77-48, as developed by the trade under the procedure of the National Bureau of Standards, and issued by the United States Department of Commerce."

Hotpoint man named chairman of NEMA refrigeration section

John F. McDaniel, manager of the refrigerator department, Hotpoint, Inc., has been elected chairman of the household refrigeration section of the National Electrical Manufacturers' Association for 1949.

McDaniel has been associated with Hotpoint since 1934. Prior to his present company position he was Pacific northwest district manager.

Oakite Products celebrates 40th anniversary

February this year holds particular significance for Oakite Products, Inc., as it marks the completion of Oakite's 40th year in the field of industrial cleaning materials and methods.

In commenting on the anniversary, John A. Carter, general manager, said "The 40 years of achievement we celebrate this month can be attributed in large measure to the company's fundamental policy of rendering a service and selling a product on the side. In the years ahead, Oakite will continue to direct its efforts toward developing this service still further, along with the designing of new materials and improved methods for applying them, to the end that cleaning costs in industrial plants and shops may be substantially lowered."

The anniversary notice states that from a single chemical cleaning material offered in 1909, the company has broadened its service to include over 80 diversified cleaning and related compounds with a field service organization of 180 men.

Boehm, Jr. advanced by Mullins

The appointment of Daniel R. Boehm, Jr. as assistant regional sales manager for Youngstown Kitchens with headquarters in Washington D. C., has been announced by Charles A. Morrow, vice president in charge of merchandising for Mullins Mfg. Corp. Boehm has been with the

Youngstown sales department since 1946.

Newark Stove executive joins Sears subsidiary

Robert W. Bowman, associated with Newark Stove Company for the past two years, has joined Universal Sanitary Manufacturing Company as controller.

Bowman joined Newark as controller. He previously had been assistant controller at Bell and Howell Company, Chicago.

Universal Sanitary, manufacturers of bathroom fixtures, is a wholly-owned subsidiary of Sears, Roebuck and Company, and maintains plants at New Castle, Penn.; Camden, New Jersey; and Redlands, Calif.

Visitor from France

A current visitor in the States for the study of American methods in stamping and enameling is Jean H. Leopold, who represents the Leopold & Company stamping and enamel works, in Pfaffenhoffen, France. He will stay in this country for several months.

An Organization With
20 Years' Experience
Servicing Porcelain Enameling Pickle Rooms
Offers
Guaranteed Results

We install our materials only after surveying plant equipment, water and other important factors

MANUFACTURERS OF LEPCO PRODUCTS

Suppliers to Porcelain Enameling Plants Exclusively
CLEANERS • NEUTRALIZERS
DRAWING COMPOUNDS

V. B. PUNDERSON COMPANY
402 SWETLAND BUILDING CLEVELAND 15, OHIO

CORRECTION

On page 21 of the November issue of *finish*, in an article entitled "The Introduction of Lithium Compounds," there was an error in a formula, column 1, line 53. The formula shows 0.5% sodium nitrate, and as will have been evident to the practical enameler, this should have read "0.5% sodium nitrite."

Abstracters for technical papers have been advised of this error.

This note is being printed so that those who keep a permanent file of *finish* may make the necessary correction.

Bendix expands licensed European manufacturing

The licensing by Bendix Home Appliances, Inc., of Bendix Home Appliances France, S.A.R.L., to manufacture and distribute washers in France and in the French possessions was announced by Harlow K. Lyons, director of the company's foreign division.

Bendix Home Appliances France is scheduled to begin production next year in its plant located in a suburb of Paris. It was stated that the plant, now being tooled, will have a productive capacity ranging from an annual minimum of 8000 units to a maximum of 20,000.

Another European company licensed to make and distribute such home laundry equipment is Bendix Home Appliances, Ltd., of England, which has the right to produce and market under English patents owned by the American company.

Five-year warranty on Apex automatic washer

A five-year warranty from date of consumer purchase is now offered on the drive-transmission of the Wash-a-Matic, new automatic clothes washer

recently introduced in Cleveland, New York, and other eastern cities by The Apex Electrical Manufacturing Company, Cleveland, Ohio.

A. C. Scott, vice president, sales, in announcing the new plan also stressed that this guarantee was in addition to the one-year full warranty of the entire Wash-a-Matic.

Canadian Ceramic Society annual meeting, Feb. 7-9

The 47th Annual Convention of the Canadian Ceramic Society will be held February 7, 8 and 9 at the Royal Connaught Hotel, Hamilton, Ontario. James Craig is president of the Canadian Ceramic Society.

U.S. Steel expects increased steel production in 1949

United States Steel Corporation has expectations of bettering during 1949 its steel production record for 1948, which established a new high for any peace-time year, Irving S. Olds, chairman of the board of directors said recently.

Olds stated his company's "record peace-time steel production and shipments of steel products during 1948 reflect, in part, the completion of a substantial part of its large post-war program of additions and improvements to its facilities. This construction program, which was begun soon after V-J Day, will involve total expenditure of more than $900,000,000 by United States Steel . . . To the end of 1948, we have spent more than $650,000,000 for additional and improved facilities under this program."

Continuing, Olds said "extraordinary demands for steel for domestic, foreign and defense purposes; for reconstruction, replenishment of inventories, and for current consumption at home and abroad; and for countless new projects of great importance to the nation's future, have occasioned the allegation that the steel industry has failed sufficiently to increase its productove capacity . . . The facts are that in 1948 the steel industry provided users with approximately 65,000,000 tons of finished products, a considerably greater tonnage of finished steel than in any other peace-time year. This record-breaking achievement should be compared with shipments of 35,000,000 of finished steel products in 1939, or with shipments of 46,000,000 in 1940, when national defense and foreign military demands first appeared in noteworthy volume."

New jobbing plant in operation

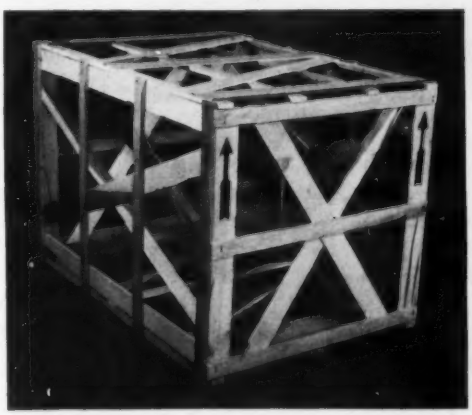
Word from Dr. Paul A. Huppert, president of Manchester Porcelain Enamel Corp., Manchester, N. Y., indicates that the firm's new porcelain enamel jobbing plant (see August, 1948, *finish*) is now in operation.

Steps taken to form association of water softener manufacturers

Preliminary steps in the formation of a national association of manufacturers of water softening equipment were taken at a December meeting at the Palmer House, Chicago, of 110

ATTENTION!
PACKAGE ENGINEERS

The Bigelow-Garvey Company has pioneered in the design and manufacture of crates for shipping porcelain enameled appliances such as stoves, washing machines, ironers, freezers, sinks, bath tubs and similar products for more than twenty-five years.



A typical Bigelow-Garvey Tight Corner Hinged Crate designed for shipping a porcelain enameled range.

Our Tight Corner Hinged Crate is very popular for appliances due to its unusual rigidity, strength and ease of assembly. Made of hardwood throughout, the cleats are pre-drilled with nail holes wherever the craters have to drive nails. The four sides are hinged together so that it can be collapsed and shipped flat, then assembled very quickly.

For complete coverage of the product we recommend our Kraft Crate which is made of corrugated fibre board reinforced with wood cleats and is also collapsible.

BOX SHOOKS PALLETS BULKHEADS

Write us regarding your shipping problems.

BIGELOW-GARVEY LUMBER CO.

General Office and Laboratory

320 West Huron Street • Chicago 10, Ill.

Mills • Arkansas • Georgia • Wisconsin • Minnesota • Washington

representatives of 48 manufacturers of water softeners.

The object of the new association is aggressively to promote the sale of water softening equipment by carrying on a comprehensive program of market development. It is expected that the new association will serve manufacturers of both industrial and domestic water softeners.

Lustron names senior v.p.

Joseph M. Tucker, formerly executive vice president of Massey Harris, farm machinery company, has been elected senior vice president of Lustron Corporation, Carl G. Strandlund, president, announced.

Tucker was head of the priorities branch of WPB during the war, and prior to that was vice president in charge of sales for the Oliver Company.

Convention committee chairman named for AGA annual meeting, Oct. 17-20

George F. Mitchell, president of The Peoples Gas Light & Coke Co., Chicago, has been appointed chairman of the 1949 Convention Committee of the American Gas Association, according to an announcement by Robert W. Hendee, AGA president and president of Colorado Interstate Gas Co.

F. X. Mettenet, vice president of Peoples Gas Light & Coke, will serve as vice chairman of the committee which will direct overall arrangement of the 31st Annual AGA Convention to be held in Chicago, October 17 to 20.

ACS 51st annual meeting in Cincinnati, April 24-28

The 51st Annual Meeting of The American Ceramic Society will be held at Cincinnati, Ohio, April 24 to 28, it has been announced. Headquarters will be at the Netherland Plaza Hotel. Reservations should be sent in as soon as possible to Chairman, Hotels Committee, American Ceramic Society, 910 Dixie Terminal Bldg., Cincinnati 2, Ohio, it was stated.

Carnegie-Illinois appointment

The appointment of Dwight L. Merrell to succeed George O. With as manager of sales, construction industries, for Carnegie-Illinois Steel Corp., was announced recently by G. A. Price, Chicago district sales manager of Carnegie-Illinois, a subsidiary of U.S. Steel.

With was appointed assistant vice president of United States Steel Supply Co., according to an announcement by M. J. Aurelius, vice president of the supply firm, also a U.S. Steel subsidiary.

Caloric Stove announces dealer financing plan

Caloric Stove Corporation has announced a financing plan which, in the opinion of Julius Klein, vice president and sales director for Caloric, furnishes triple benefits which will enable dealers to more readily, and at less expense, supply the consumer demand for modern gas ranges.

According to Klein, the "Caloric Plan" offers these advantages to dealers: (1) a completely representative line of floor samples at low investment cost, (2) relief from warehousing problems through selling from floor samples and getting customer delivery from complete stocks maintained at 39 Caloric warehousing points throughout the country, and (3) prompt deliveries to all customers because as sales are made there is no waiting to replenish dealer stocks.

With an original investment of only 20% of their cost, the dealer can carry an adequate number of floor samples, says Caloric. The remainder of the initial cost is carried at a low simple interest rate for a period of seven months.

Fuel reserves discussed at Pittsburgh ACS meeting

The December meeting of the Pittsburgh Section of the American Ceramic Society was devoted to a discussion of fuels for the ceramic industry. Dr. A. C. Fieldner, chief of fuels and explosives, Bureau of Mines, covered the various types of fuels available for use in the ceramic industry and the percentage of each of these fuels used in the various branches of ceramics.

Figures showed by Dr. Fieldner indicated that the total fuel requirements for these industries increased approximately 50% from 1939 to 1947. However, the distribution of the use of coal, oil, and natural gas is still approximately the same, namely, 63% of the industry uses coal, 9% used oil, and 28% uses natural gas.

Locke, Inc. appoints Chicago regional manager

S. P. Brady has been named Chicago regional manager of Locke, Inc., manufacturers of insulators, ceramics, and pole line hardware, according to an announcement by E. M. Haines, vice president of marketing.

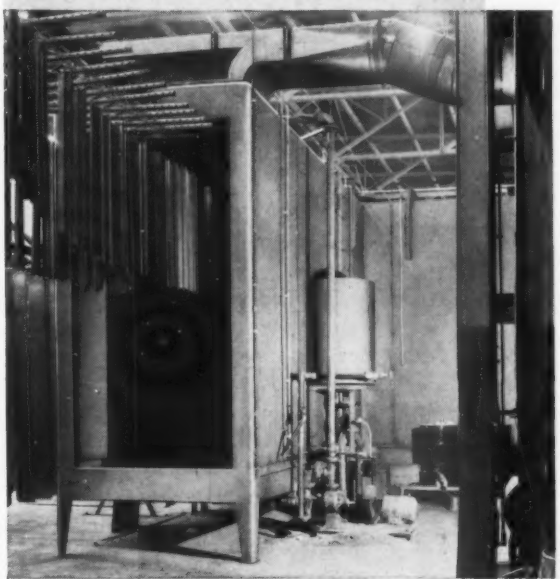
Brady first joined Locke in 1938,

to Page 58 →

COMPLETE *Finishing* SYSTEMS

for ENAMEL • LACQUER • PAINT

General view of the Complete Mahon Finishing System installed in the Martin-Parry Corporation's plant, Toledo, Ohio. This system consists of Metal Cleaning and Chemical Preparation Equipment, Dry-off Oven, Flow Coating Machine, Drip Area Enclosure, and Final Bake Oven.



Mahon Flow-Coating Machine for applying Prime Coat on Steel Wall Panels, Metal Doors and Frames, and other Parts—part of the Complete Mahon Finishing System in the Martin-Parry plant, Toledo, Ohio.

. . . Combination Gas and Oil Fired!

Here is another typical Mahon solution of a finishing problem which involved prime coating metal doors and frames, metal wall panels up to ten feet in length, and a variety of other metal parts of many shapes and sizes. Combination gas and oil fired heating units were engineered into this entire system—for Metal Cleaning and Chemical Preparation Equipment as well as Dry-off and Final Bake Ovens . . . change over from gas firing to oil firing may be accomplished in a matter of seconds without interrupting production. When you contemplate new, modern finishing equipment—regardless of what your finishing problem may be—remember that Mahon has pioneered development in this highly specialized field for twenty-eight years . . . this broad experience, which covers many diversified industries and is world-wide in scope, together with constant experimental research, has endowed Mahon engineers with a wealth of technical knowledge and practical know-how not available to you elsewhere. Better planning, better engineering, and a better and more economical job of finishing is the result. See Sweet's Mech. Ind. File for complete information.

THE R. C. MAHON COMPANY

Home Office and Plant, Detroit 11, Mich. • Western Sales Div., Chicago 4, Ill.

Engineers and Manufacturers of Complete Finishing Systems—including Metal Cleaning and Chemical Preparation Equipment, Dry-off Ovens, Hydro-Filter Spray Booths, Filtered Air Supply System, Drying and Baking Ovens, and Paint Reclamation System. Also, Core Ovens, Hydro-Foam Dust Collectors, and many other Units of Special Production Equipment.

MAHON

→ *from Page 56*

and soon was made manager of distribution materials with headquarters in Baltimore. Later he was given a leave of absence, but rejoined Locke on January 1, 1949.

Appointments at Lustron

Lustron Corporation has announced the following appointments in its erection and service department: Edwin P. Doerr, manager; Erwin C. Hock, assistant manager; and V. J. McMorrow, head of foundation methods section.

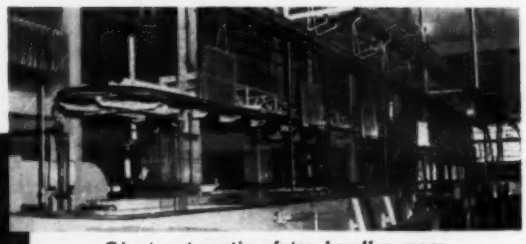
Amendment to consolidated freight classification

The use of wirebound crates has been authorized by the railroads for shipping all items of furniture, both metal and wood, heretofore permitted in wooden crates, according to an announcement. The new authorization for wirebound crates is in Amendment No. 4 to Consolidated Freight Classification No. 18, now in effect. With publication of the amendment, special permits need no longer be sought so long as the wirebound crates used meet the specifications set forth in the amendment, it was stated.

Headquarters of the Wirebound Box Manufacturers Association, which led the fight for acceptance by the railroads of wirebound crates, hailed the ruling as making available to the furniture industry scientifically engineered and sturdily constructed shock absorbing crates that for many years have been widely used as standard shipping containers by many industries.

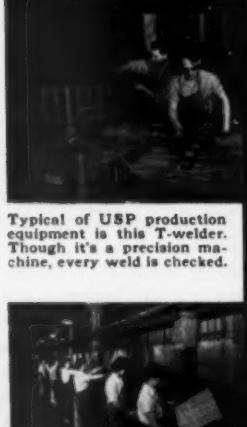
YOUR kind of shelving

...DELIVERED TO MEET YOUR PRODUCTION SCHEDULE

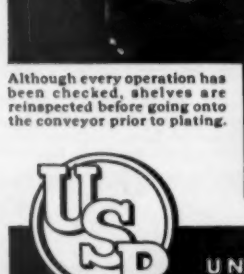


Giant automatic plater handles more than 9000 shelves in 24 hours, performs 17 different operations.

The most complete, up-to-the-minute facilities keep costs down . . . critical inspections like these keep quality up.



Typical of USP production equipment is this T-welder. Though it's a precision machine, every weld is checked.



Although every operation has been checked, shelves are reinspected before going onto the conveyor prior to plating.

This is a pretty big statement, but it's true: "Whatever your shelving requirements—as to size, shape, quantity, or *finish*—Union Steel can produce them *at cost-reducing economy to you.* You'll get top quality every time. And, because Union Steel's production facilities *are* so extensive, your shelving will be delivered according to a pre-determined schedule that suits your production needs to a "T." Furthermore, if you have a design problem, USP engineers can show you how to get more and better shelving for your money. Figured from any angle, it pays to standardize on Union Steel shelving. Let's get together and talk it over. Drop us a line.

USP HEATING ELEMENT FRAMES MEAN A BETTER OVEN

Typical example of how USP helps you make a good stove better. Enables you to arrange heating coils as *you wish,* by means of round "doughnut" type porcelain bushings that snap in where needed. They assure uniform heat at low cost per oven.

USP

UNION STEEL PRODUCTS COMPANY
ALBION, MICHIGAN

Philco distributor conventions largest ever held by company

To introduce its new 1949 refrigerators, home freezers and air conditioners, Philco Corporation held sales conventions for 1500 representatives of its wholesale distributors in Palm Beach, Florida, January 5-9, and in Santa Barbara, Calif., January 13-14, according to James H. Carmine, vice president—distribution. Carmine reported that these combined conventions were the largest ever held by Philco.

Youngstown Kitchens advertising

A program which the company expects will generate more than four and a half million dollars worth of advertising and promotional effort for Youngstown Kitchens in 1949 has been launched by Mullins Manufacturing Corp. Marshall Adams, advertising and sales promotion manager, says the program includes national advertising and six national promotions in which Mullins, its 60 distributors, and nearly 9000 dealers will take part.

Expanding polyvinyl alcohols facilities

Authorization of an investment of about $3 million to expand facilities for the production of polyvinyl alcohols at its Niagara Falls plant

was announced by E. I. du Pont de Nemours & Co. Among the major industrial uses are ceramics, temporary protective coatings, and stencil screens.

New Binks board member

Joseph D. Linehan has been elected to fill a vacancy on the board of directors of Binks Manufacturing Co., J. F. Roche, president, announced.

Linehan is president of Continental Plastic Corp. He is also a vice president of Linehan, Inc., printers and lithographers, and a director of the Liberty Federal Savings and Loan Association of Chicago.

Merchandise Mart guided tours survey

According to Wallace O. Ollman, general manager of The Merchandise Mart, Chicago, a nationwide survey has revealed that forty-eight per cent of the tourists participating in the Mart's guided tours have visited their local dealers as a direct result of the tour, and, of this group, seven out of every ten actually made one or more purchases.

The program, designed to stimulate interest in the home and home-furnishings, was begun in March, 1948, and in nine months of operation, more than 80,000 tourists viewed several thousand displays of home-furnishings in the market center. Of this total, sixty per cent were housewives and sixty-two per cent owned their home, the survey shows. Until the guided tours program was inaugurated, the public was barred from the wholesale market building.

Minnesota Mining subsidiary buys oudoor sign firm

National Advertising Co. of Westminster, Md., has acquired the Lee Larson Co. of Waukesha, Wis., one of the oldest organizations in the small roadside advertising sign business, for about $2 million, according to a report. National Advertising is a wholly-owned subsidiary of Minnesota Mining & Mfg. Co. Signs erected by National and Larson feature 3M's patented "Scotchlite" reflective sheeting, giving the signs day-and-night readability.

PEI seeks research fellow for Bureau of Standards post

Announcement has been made of an opening for a research fellow to head the Porcelain Enamel Institute's Fellowship at the National Bureau of Standards, Washington, D. C.

Edward Mackasek, PEI managing director, states that the work of this fellowship is primarily directed to the investigation of the properties of porcelain enamel, and the development of test methods, procedures and apparatus for evaluating these properties as a basis for higher product quality and better processing techniques. A knowledge of ceramics would be desirable, but is not essential since the principal requirements for the post are a formal background in physics and chemistry coupled with imagina-

to Page 62 →

SPARKLER
horizontal plate
FILTERS

SPARKLER horizontal plate FILTERS

Good Plating Requires Clean Plating Solutions

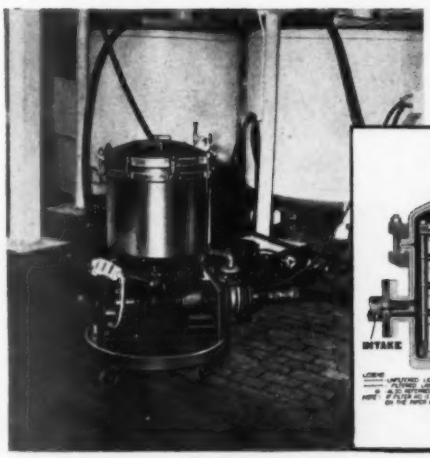
Sparkler Horizontal Plate Filters effectively remove all solids and precipitates from plating solutions—provide positive assurance that solutions are free from undesirable matter.

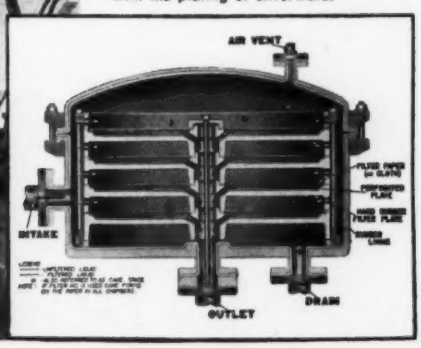
The horizontal plate principle used by Sparkler makes possible the formation of firm, stable filter cakes that will not slip or crack under intermittent or continuous flow. Flow through the filter is always *with* gravity, and filter aid is floated into position, forming a firm cake of even thickness.

The accompanying photograph shows a typical Sparkler installation in a modern plating plant. Previously, in this plant, silver chloride slurry was shoveled into crocks and laboriously washed by decantation. Now, chloride is mechanically agitated, collected, and washed in the Sparkler filter. Cost of the operation has been sharply reduced and quality of the chloride has been greatly improved.

Filters are pressure-tight and leakproof, and are available in rubber-lined construction, stainless steel, or iron. Capacities from 60 to 10,000 G.P.H.

Our Engineering Service is available for your specific problems.





SPARKLER MANUFACTURING CO.
MUNDELEIN, ILLINOIS

This Sparkler Filter is used by a large silverware manufacturer in connection with the plating of silverware.

Perfection Requires *Time...*

Modern progress has been predicated on improving that which has gone before. A day! A month! Years, are elements of time required to approximate perfection. When Pemco releases a new frit—a new color—a new product—you are assured that it represents sufficient research—pilot plant and field testing so that it is no longer "experimental" as judged by the most advance knowledge and inventive ingenuity known to the porcelain enameling industry. And until then you will never hear of it! Yes, perfection requires time!

For example we hold to the opinion that the release of low temperature frits should not be predicated upon the development of one or two enamels. Pemco now has low temperature ground coats—acid resistant cover coats and regular cover coats, but . . . AND UNTIL WE HAVE PERFECTED A COMPLETE LINE OF 1300° enamels we do not feel they should be released. Yes, PERFECTION REQUIRES TIME. But time is on the side of Pemco. So you who are interested in Low Temperature Porcelain enamels—enamels that are definitely better—enamels that mean smoother operation, superb performance and uniform quality YOU will find it to your advantage to KEEP YOUR ATTENTION CENTERED ON PEMCO . . . for Profit.

PEMCO CORPORATION

Baltimore 24, Maryland

Always Begin With a Good Finish

→ *from Page 59*

tion, mechanical ingenuity and acquaintance with research procedures. One of the most recent contributions of the Fellowship is an electronic portable adherence meter used to check the bond between porcelain enamel and the base metal.

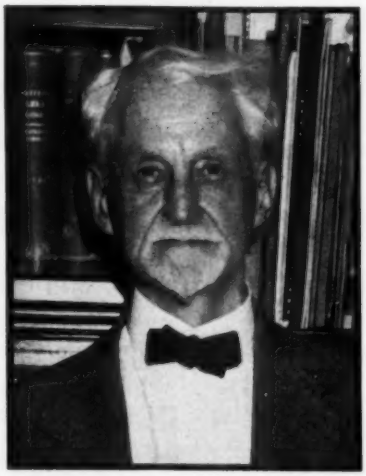
Lee Mercer dies

It is with deep regret that *finish* reports the death of Lee Dale Mercer on Tuesday, January 11, following a brief illness. Mr. Mercer, assistant manager of sales, Sheet & Strip Division at Republic Steel, Cleveland, died at the age of 74 following 44 years of active work in the steel industry.

He started with Berger Manufacturing Company, Canton, Ohio, in 1905, which later operated Stark Rolling Mill Company. This brought him to Republic Steel later as Republic became the parent company.

His activity in the sheet steel and metal finishing industries earned for him many friends in both who will regret to learn of his passing.

Dr. Ross Purdy dies



Dr. Ross Coffin Purdy, a leader in industrial ceramic technology and a dominant figure in The American Ceramic Society from its earliest days, died January 6. (A biography of Dr. Purdy is presented elsewhere on this page.)

Sixteen million for improvements

The Youngstown Sheet and Tube Company will spend $16 million on additions and betterments in its plants during 1949, compared to $8¾ millions in 1948, company officials have announced.

Instrument school announces 1949 program

Industrial instrument maintenance and repair courses, conducted for the past 15 years by Brown Instruments Division of Minneapolis-Honeywell Regulator Company, will be divided during the first six months this year into four classes of five weeks each, and longer courses for company personnel, a report states.

M. J. Ladden, head instructor, said that the course for company personnel will start February 21. It will be subdivided into specific classes

Clean big parts with the OAKITE STEAM GUN!

HERE'S an easy way to clean metal parts that are too large to be soaked in tanks or conveyed through washing machines.

Just use the Oakite Solution-Lifting Steam Gun to apply an Oakite cleaning solution under about 40 pounds of steam pressure. Oil, grease and other dirts vanish quickly, leaving parts ready for inspection, assembly, further machining, overhaul or repair. The same gun may be used with Oakite paint-stripping solutions.

FREE Write to Oakite Products, Inc., 17 Thames St., New York 6, N. Y., for illustrated folder F7338 containing more information about the various models of the Oakite Solution-Lifting Steam Gun and the many cleaning operations on which they are used with substantial savings in time and money.

OAKITE
REG. U. S. PAT. OFF.
INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

Technical Service Representatives Located in Principal Cities of United States and Canada

A biography of Ross Coffin Purdy

Upon his graduation from Ohio State University in 1908, Ross Coffin Purdy was elected to membership in Sigma Xi for distinctive achievements in school and in ceramic education.

In 1909 he served as president of The American Ceramic Society, and in succeeding years continued his activities in the Society in various capacities including general secretary and editor, a dual position he held for 25 years prior to his retirement from active service in 1946.

Retiring from the professorship of ceramic engineering at Ohio State in 1912, Ross Purdy began a round-robin correspondence proposing a reorganizing of The American Ceramic Society to include industrial divisions, local sections, student branches and standing committees. This reorganization was achieved in 1918.

The Rice Leaders of the World Association, in 1929, presented him with a certificate "as one whose achievements have done much to build prestige for your community and our country." *(See June, 1946,* finish *for a list of Ross Purdy's citations and achievements.)*

One of the last awards he received was the First Annual Albert Victor Bleininger Award "for distinguished achievement in the field of ceramics" which was presented to him by the Pittsburgh Section of The American Ceramic Society, on March 12, 1948.

for instruction in millivoltmeters, mechanical pyrometers, continuous balance electronic potentiometers, electrically operated automatic control, flow meters, thermometers, pressure gauges and hygrometers, air-operated control, tachometers, resistance thermometers, CO_2 and analygraph. The five-week classes will continue through to June 17.

New U.S.S. vice pres.—engineering

Benjamin F. Fairless, president of United States Steel Corporation of Delaware, has announced the appointment of M. W. Reed as vice president—engineering to succeed B. H. Lawrence, who is retiring after more than 44 years with U.S. Steel.

New Florence sales manager

C. Fred Lucas was appointed general sales manager of Florence Stove Co., according to Robert H. Taylor, newly elected president and former general sales manager. Lucas had been sales manager of the firm's southern division.

Steel cabinets get minimum standards tests

Sample cabinets to be subjected to tests developed by the Steel Kitchen Cabinet Institute are taken off the production line of manufacturers. The cabinets are sent to an independent testing laboratory where they are subjected to eleven different mechanical tests and ten tests for cabinet

to Page 65 →

WEBB *Towveyor*

FLOOR TYPE TOW CONVEYOR

- ***FAST***—**Operator Drops Pin In Slot, Walks Away . . . No Loading Time Lost.**
- ***CLEAR FLOOR***—**No Obstacles . . . You Can Truck Over It Easily.**
- ***FLEXIBLE***—**Can Be Routed As Required . . . Disengaged Anywhere Along The Route.**

The Webb Floor Tow Conveyor is a new type chain conveyor running in a slot below the floor. Standard shop or warehouse trucks, either 2 or 4 wheel are used. The simple towing pin mechanism is bolted to the front end. Uncomplicated, easy to operate. No overhead structure to interfere with floor traffic.

From the time of its founding, 30 years ago, Jervis B. Webb Company has been identified with improvements in all types of conveyors and has pioneered many of them. Webb Overhead Trolley Conveyors, Power and Free Conveyors, Slat, Drag Chain, Belt, Roller and Portable conveyors are reducing costs, speeding production in thousands of plants and warehouses.

3192

JERVIS B. WEBB COMPANY

Conveyor Engineers and Manufacturers

8951 ALPINE AVENUE • DETROIT 4, MICHIGAN

Offices in Principal Cities

● Functional Machined-Brass Castings or Forgings

We all learned it in school—"A Straight Line Is The Shortest Distance Between Two Points". We learned that the circumference of a circle is more than three times the diameter. This means that it takes less than one third the time to follow a straight line from point to point than to go all around in a circle.

So if you find yourself going around in circles seeking a dependable source of functional machined-brass castings or forgings just think of that straight line—think of Detroit Brass. By going *straight* to Detroit Brass you'll gain the benefit of fifty years progressive experience.

Your need may be a standard valve or fitting or it may call for the development of a special item to meet a particular requirement. From idea and design through production and service we are equipped to assure exacting cooperation to the manufacturer seeking a dependable source of functional machined brass.

We are serving many industries which would indicate that we may have something to offer you. So for action, for results follow the straight line—to Detroit Brass.

Some of the scores of industries for which "Detroit Brass" has produced components in volume and variety—always on the same top-quality level:—

Agricultural • Aircraft • Automotive • Beverage • Cooking • Diesel Engine • Dry Cleaning • Farm Machinery • Gas • Gas Heating Equipment • Locomotive • Maritime • Milking Machine Equipment • Oil Refining Equipment • Oil Heating Equipment • Plumbing • Refrigeration • Rubber • Spray Equipment • Washing Machine • and others.

DETROIT BRASS & MALLEABLE WORKS

DETROIT 9, MICHIGAN

→ *from Page 63*

finishes. The program is to establish minimum quality standards.

When a line of cabinets pass the tests prescribed by the Institute, the manufacturer may use the copyrighted seal of approval of the Institute.

Lustron installs LP-gas standby

The majority of the furnaces at Lustron Corporation, builders of porcelain enameled steel prefabricated homes, are designed to use natural gas. To insure against production interruption on natural gas curtailments, H. Emerson Thomas & Associates, Inc., of Westfield, N. J., LP-gas contractors and engineers, recently completed an LP-gas system under a "turn-Key" contract.

The system comprises 240,000 gallons of propane storage, and the mixing equipment is designed to make a propane-air mixture interchangeable with the natural gas.

A. O. Smith celebrates 75th birthday

Herman Welzien, in his 58th year with A. O. Smith Corporation, lights the candles on the firm's 75th birthday cake, as J. J. Stamm, treasurer, in his 51st year of service, looks on.

The A. O. Smith Corporation was founded as a general machine shop in a semi-basement in downtown Milwaukee in 1874 by C. J. Smith and his sons. In 1902, Arthur O. Smith, one of the sons, produced the first pressed steel auto frame, and in 1904 the firm took his name. When A. O. Smith died in 1913, and was succeeded by his son, L. R. Smith, the firm had become the world's largest maker of auto frames.

Experience in working steel and welding techniques led the firm into the manufacture of welding electrodes, gas line pipe, electric motors and other products. Among the most important products are pressure vessels, large diameter gas line pipe, and single-piece glass lined tanks for beer storage, domestic and large volume water heaters.

New officers elected at New Jersey ceramic association annual meeting

Samuel J. McDowell, development engineer for American Lava Corp., was elected president of the Ceramic Association of New Jersey at its annual meeting in December at Rutgers University.

N. Johnson Kent, of Johns-Manville Corp., was elected vice president. August Staudt, Perth Amboy, N.J., remains as councillor. John H. Koenig, director of the Rutgers School of Ceramics, continues as secretary-treasurer, and Emma L. Nawrot, of the same department, as assistant secretary.

In an address to the Association, R. R. Danielson, of Metal & Thermit Corp., retiring president, pointed out that present enrollment includes 285 personal members and 31 corporation members, the largest enrollment in the Association's history.

Enamelers club meetings

The next meeting dates for District Enamelers Club are as follows: Chicago District, February 26; Eastern District, February 19; and Pacific Coast, February 18. Members are urged to contact their Club secretary for exact time and place.

Pfaff named to Signode board

Otto A. Pfaff, president of American Wheelabrator & Equipment Corp., Mishawaka, Ind., was recently elected to the board of directors of Signode Steel Strapping Co., Chicago, manufacturers of steel strapping, strapping equipment, retaining doors and strips for use in packaging and protecting shipments while in transit.

Bushfield advanced by Perfection

The appointment of L. Bushfield as sales manager of the range and heater division of Perfection Stove Co. was announced by C. H. Foulds, vice

president in charge of sales. For the past four years manager of the firm's Atlanta district, Bushfield succeeds O. H. Larimer, who is retiring after 30 years with the sales division.

Lustron in production

For some time Lustron has been producing its porcelain enameled steel home for consignment to specific areas as "display homes." It is reported that the first house for public sale, consigned to a St. Louis dealer, left the Columbus plant on Thursday, January 6. Erection was at Webster Groves, a suburb of St. Louis.

With steel supply assured, tools and other needed machinery in final stages of completion, the company expects to advance from "four-cylinder" operation to "eleven-cylinder" operation *(11 is the number of porcelain enameling furnaces)* in the near future. The schedule for January was placed at 240 completed homes.

"Man size" pickling hooks

These six hairpin pickling hooks, weighing 1272 pounds each, are said to be capable of carrying loads up to 4200 pounds. Fabricated entirely by welding, the hooks are made of heavy Monel plate. The round supporting members are of steel covered with a welded-on jacket of 14 gauge Monel. The hooks were designed and made by Youngstown Welding and Engineering Co., Youngstown, Ohio, for the pickling of wire and cable.

Trenton ACS section meeting

The next meeting of the Trenton Section of the American Ceramic Society will be held Friday evening, March 25. The principal speaker at the meeting will be John Kane, of American Air Filter Co., Inc., according to J. T. Smith, assistant publicity chairman.

Another DuPont field laboratory

A field service laboratory to assist industries in the Middle West in handling their finishing problems has been opened by the Du Pont Company in Chicago. It is reported to have facilities for spraying and baking refrigerators, furniture, and other metal and wood articles. It is under the direction of William P. Fisher, Chicago regional industrial sales manager of the firm's finishes division.

Washer sales in 1948 top 4,000,000 units

Industry-wide factory sales of standard-size household washers, postwar, passed the 10-million mark in November, and 1948 sales will top 4,000,000 units for the first time in history, culminating three record-breaking years in a row, 2,023,981 units in 1946, 3,783,632 in 1947, and around 4,400,000 for 1948, according to a preliminary estimate reported by the American Washer and Ironer Manufacturers' Association.

Mackasek to attend West Coast meeting

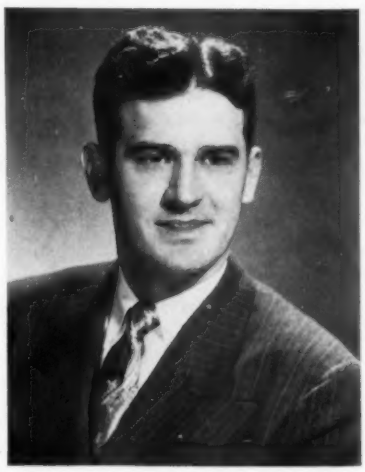
Edward Mackasek, managing director of the Porcelain Enamel Institute, will attend a meeting of the Pacific Coast Enamelers Club, February 18, in order to explain to the group the objectives and progress of the current PEI Packaging and Shipping Program, it has been announced.

PEI annual meeting set for October 27 and 28

The 18th Annual Meeting of the Porcelain Enamel Institute will be held October 27 and 28 at French Lick Springs Hotel, French Lick, Ind., according to an announcement from PEI headquarters.

By decision of the Institute's executive committee, the next Sales and Management Conference will not be held in conjunction with the Annual Meeting. The 3rd Sales and Management Conference has been tentatively scheduled for March 17, 1950.

Appointment at Tennessee Enamel



The appointment of Frank Drake as sales manager of the gas heating division of Tennessee Enamel Mfg. Co. was announced by W. B. Evans, Temco president. Drake has been with the firm since 1941.

As sales manager he will supervise the distribution of Temco heat-

to Page 68 →

Colors don't fit your frit?

Don't fret!

Call on DRAKENFELD, your partner in solving color problems

WHY FRET over porcelain enamel colors that don't "fit" your frits? Let Drakenfeld wade in and help you in your fight against the high cost of production. Our technologists will go to work with rolled up sleeves to produce colors that fit your frits, whether you produce domestic, commercial, architectural or industrial porcelain enamel products.

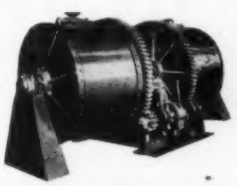
Drakenfeld colors are backed by many, many years of research and by a broad knowledge of all kinds of methods of producing porcelain enamel products that require color. We invite you to learn all about our research facilities and the step-by-step checks that go into our color production to assure you that every safeguard is taken to provide colors that meet your high standards.

Call today and let us discuss how our porcelain enamel color service can help you attain greater production, fewer rejects and a better profit.

DEPENDABLE SERVICE ON: Oxide Colors . . . Screening Paste . . . Graining Colors . . . Squeegee Oils and Mediums . . . Rotospray Sifters . . . Steveco Grinding Mills . . . Porcelain Grinding Balls . . . Porcelain Mill Linings.

5 SAVINGS WITH STEVECO MILLS

Time
Labor
Horsepower
Floor Space
Initial Costs



Steveco high-efficiency duplex mills wet-grind porcelain enamel materials faster, better and at low cost. Many outstanding construction features proved in hard day-after-day service in many plants. Wide range of sizes and linings, with all types of drives. Write for catalog, then let us study your grinding needs and recommend the correct type for your requirements.

Rotospray — a millroom must!

The Rotospray helps you get properly prepared slip for the production line. Indispensable for "reconditioning" enamel slip. Equally valuable at ground coat dip tanks. Ideal for any job that requires speedy, positive sieving. Strains through a long-life vertical screen—no clogging. Standard and Junior sizes. Capacities range from 300 to 1,000 G.P.H., depending on nature and specific gravity of product, screen mesh and sifter size. Write for descriptive folder.

Drakenfeld

B. F. DRAKENFELD & CO., INC. • 45-47 Park Place, New York 7, N. Y.

Factory and Laboratories: Washington, Pa.

Pacific Coast Agents: Braun Corp., Los Angeles 21 . . . Braun-Knecht-Heimann Co., San Francisco 19

→ *from Page 66*

ing equipment to 120 wholesalers serving more than 10,000 retail outlets in the United States, Canada, and Mexico. Since its inception Temco, a strong advocate of porcelain enamel for heating appliances, has produced and sold over a million heating appliances.

E. K. Priest is president of Lynn Products

Announcement from Lynn Products, Lynn, Mass., manufacturers of oil burning equipment, covers the election of E. K. Priest as president of the company. Ernest C. Leach, vice president, was re-elected.

Mr. Priest has been connected with the stove industry for fifteen years. He was general manager of Floyd Wells Company, and president and general manager of Moore Corporation, continuing in the latter position until 1946. During the war he was a member of the Domestic Appliance Advisor Committee of WPB. He is a former trustee and secretary of the Institute of Cooking and Heating Appliance Manufacturers.

Walter Borst appointed director of engineering for Lustron

The appointment of Walter J. Borst as director of engineering for Lustron Corporation was announced recently by Gen. Eugene Reybold (ret.), vice president in charge of operations.

From 1916 until 1938, Borst was associated most of the time with John Deere Company, rising to superintendent of the Harvest Works at East Moline. From 1938 until the start of the war in 1941 he managed the Battle Creek (Mich.) works of Oliver Company. He then served two years as an engineering consultant on tanks, airplanes, and engines. In 1943, he again joined the Deere organization, and was made manager of its plant in Minneapolis. In 1945 he was placed in charge of methods and development research for Deere's plow works.

Fifth annual training directors conference in Cleveland March 3, 4 & 5

A varied program, covering different phases of employee training, has been arranged for the fifth annual conference of the American Society of Training Directors, March 3, 4 and 5, at Hotel Carter, Cleveland, Ohio.

Progressing on the theme, "Train-

It's MISCO for HEAT RESISTING ALLOYS IN ROLLED MILL FORMS

Sheets — Plates — Rounds ● Squares ■ Hexagons ● Flats — Angles L
Channels U Sections Pipe ○ Nuts ⬡ Welding Rod

WHENEVER YOU NEED ROLLED HEAT RESISTING ALLOYS CONSIDER THESE MISCO ADVANTAGES

1 *Select* the ALLOY that does YOUR job best. These job-proven Misco Heat Resisting Alloys (in stock) offer you a correct alloy analysis for every condition of high temperature service . . .

MISCO METAL . . . . . A.I.S.I. TYPE 330 . . . . . 36 NI—16 CR
MISCO K . . . . . A.I.S.I. TYPE 310 . . . . . 20 NI—25 CR
MISCO B . . . . . A.I.S.I. TYPE 309 . . . . . 14 NI—23 CR
MISCO 430 . . . . . A.I.S.I. TYPE 430 . . . . . 17 CR

When buying from Misco you are not limited to one general purpose alloy only.

2 DELIVERY—Within 3 days. Over 200 items in warehouse stock—more in process for direct mill shipments. Send now for up-to-date monthly stock list.

Cut down overhead—let Misco be your warehouse.

3 COST—Regular published mill Stainless prices apply to warehouse shipments—with minor exceptions.

You don't pay "Specialty Alloy" high prices to Misco.

4 QUALITY—Rigid quality control based on our experience as the largest exclusive heat resisting alloy distributor, regularly dealing with hundreds of customers, in many diversified industries, located in every part of the United States.

Send your alloy orders to Misco.

ROLLED HEAT RESISTING ALLOYS
Sheets — Plates — Rounds ● Squares ■ Hexagons ● Flats — Angles L Channels U Sections Pipe ○ Nuts ⬡ Welding Rod

ROLLED PRODUCTS DIVISION
Michigan Steel Casting Company
MISCO
1939 GUOIN ST. • DETROIT 7, MICH.
One of the World's Pioneer Producers and Distributors of Heat and Corrosion Resisting Alloys

Let The ARIDIFIER

CLEAN YOUR AIR AND GAS LINES

Removes 92% Oil, Water and Dirt

The Aridifier gives you positive removal of oil, moisture and other foreign matter from air or gas lines. With paints and lacquers it often eliminates bloom and imperfections in finish. It provides dry lines for ceramics, sand blasting, for air cleaning, etc. Wherever the need exists for dry clean air or gas, the Aridifier delivers the goods. Easily installed. No maintenance problem. 10 models available. Capacity range: As low as 7 CFM to 17,000 CFM.

BULLETIN 147 Tells The Complete Story

HOW IT WORKS Exploded view shows how four multi blade rotors revolve at high speed in opposite directions under impact of air movement through non-aligned rotor spaces. Moisture, dirt and other foreign matter which collect on rotor blades are thrown out of air stream by centrifugal force to side of housing, and pass into drain.

Made By The Manufacturers of Logan Lathes and Shapers.

Logan ENGINEERING CO.
4929 W. LAWRENCE AVE., CHICAGO 30, ILL.

ing Moves Ahead," the March 3rd program will include a key note address by Samuel L. H. Burk, of Pittsburgh Plate Glass Co., followed with talks by Allen W. Rucker, of Eddy-Rucker-Nickels Co., and Dr. Samuel Renshaw, of Ohio State University.

Friday's program will include discussions by Walter W. Cenerazzo, of American Watchmakers' Union, Dr. Kenneth McFarland, superintendent of schools in Topeka, Kan., and Dr. E. Wight Bakke, of Yale Labor Management Center. On Saturday Michael J. Kane, management consultant, will serve as moderator for a panel discussion.

Provision is being made for an afternoon visiting the Lighting Institute of General Electric Company, at Nela Park.

The convention committee anticipates that from 800 to 1000 training directors will attend from wide-spread territory in the United States and Canada.

Youngstown shipments highest in history

Shipments for December and for the three months of October, November, and December were the highest in the history of The Youngstown Sheet and Tube Co., Frank Purnell, president, announced recently.

Progress?: "I told the salesman from whom I had bought our postwar refrigerator that more paint had chipped off it in two years than from the old one in 15. He didn't seem surprised — said it was because the old one was porcelain while this was painted steel . . . and that the new one was better because you could have the spots 'touched up,' since it had been painted originally. Now there's reasoning: it's better to have something that can easily be repaired when it needs it — "

From "The Woman's Viewpoint," by Charlotte Montgomery, in December 17, 1948, *Tide*.

let these

SPECIALIZED WYANDOTTE COMPOUNDS

help solve your metal cleaning problems

In the complete line of Wyandotte Metal Cleaners, you'll find a product designed to meet your particular needs.

Wyandotte Porenac, for example, is prepared especially for the removal of drawing lubricants prior to porcelain enameling, barrel plating or oxide finishing. Its concentration requirements are low – its life in solution extremely long. Porenac sharply reduces cleaning time because it eliminates the necessity for pre-cleaning. It emulsifies the toughest mineral oil compound quickly and at low cost.

Wyandotte W.L.G.* is excellent for cleaning parts in rotary washing machines between machining operations and before inspection, assembly and heat treating. It is also an efficient soak-tank cleaner. In the electro-cleaning of steels, W.L.G. can be used as pre-soak cleaner where a double cleaning cycle is available.

Wyandotte Chemicals Corporation, with its own sources of raw materials, makes the complete line of *specialized* metal cleaners. Whatever *your* cleaning needs may be, it will pay you to get in touch with your nearest Wyandotte Representative.

Wyandotte REG. U. S. PAT. OFF.

*Registered trade-mark

WYANDOTTE CHEMICALS CORPORATION
WYANDOTTE, MICHIGAN • SERVICE REPRESENTATIVES IN 88 CITIES

Washington round-up

→ *from Page 32*

President recommended that the Government should have authority to limit wage adjustments which would force a break in a price ceiling, except where they are essential to remedy hardship, to correct inequities, to prevent an actual lowering of living standards. Wage adjustments which can be absorbed within the price ceiling should not be interferred with by the Government.

Forecasters immediately went to work on the chances of these key economic controls being enacted by the 81st Congress. They came up with the predictions that allocation powers might be granted, price controls no, industrial expansion powers very unlikely.

However, veterans of the Washington scene who saw what happened on November 2 last are prepared to believe that Mr. Truman will have very little trouble getting a Democratic Congress to enact a few legislative proposals when he was able to overcome the much bigger problem of a Republican landslide. And there is also to be considered the fact that the forecasters who predicted the Dewey victory are the same fellows who are saying the economic controls program will not be enacted.

Of special interest to manufacturers of household equipment is the President's proposal in his State of the Union message that the authority to allocate materials in short supply and to impose price ceilings on such materials, could be used, if found necessary to channel more materials into homes large enough for family life at prices which wage earners can afford.

Building costs must be lowered, the President said. Most of the houses we need will have to be built by private enterprise without public subsidy. As of now, by producing too few rental units and too large a proportion of high priced houses, the building industry is rapidly pricing itself out of the market, Mr. Truman said. He recommended a low-rent housing program, with legislation providing for one million such units in the next seven years. This program, and the authority to allocate materials and establish price ceilings for low-priced housing, will very likely be enacted.

Senator O'Mahoney, a leading Democrat, is prepared to deal with the monopoly question at this session. He said recently he would not reintroduce his price bill which would make the big corporations submit proposed price increases for review by the Federal Trade Commission but that he would submit legislation which will propose an "economic constitution" for industry.

In another report, Secretary of Commerce Charles Sawyer said that distribution and use controls over tin and antimony are still needed to help check the inflationary effects of supply shortages in the domestic economy.

Supplies of tin and antimony have increased in 1948 but larger quantities have been made available to the stockpile. Domestic demand for antimony has been approximately in balance with supply in 1948, but the purchase of several thousand tons for the stockpile has caused a reduction both in privately owned stocks and those held by the RFC.

The manganese problem

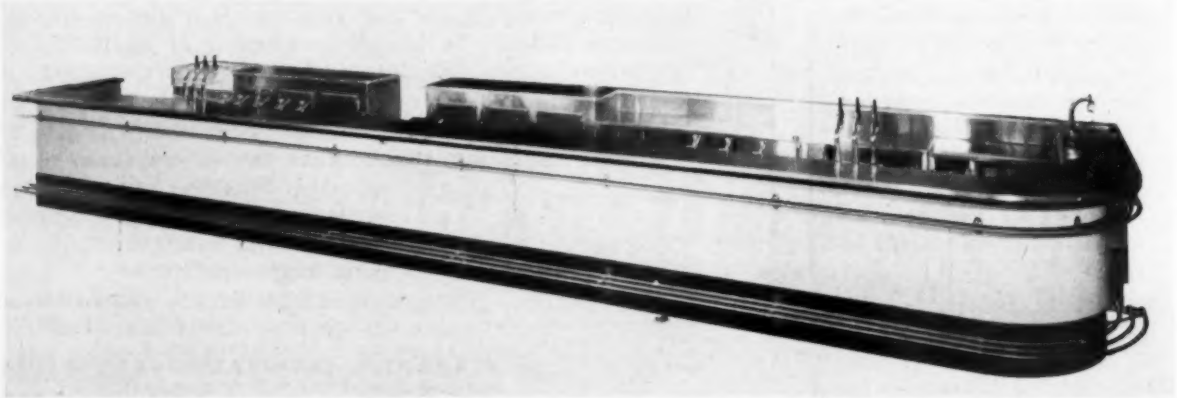
Biggest end of the year scare in industry is the reported action by the Soviets in shutting off manganese supplies for the U. S. The State Department and Office of International Trade have not acknowledged the truth of these reports which come from steel producers. More than 40 percent of our manganese supply has been imported from the USSR. If the reports are confirmed, and this is an actual shutting off of all manganese supplies, it is probably in retaliation for the cutting off by the U. S. of all exports of industrial machinery to the USSR. The cutting off of the Russian manganese imports would

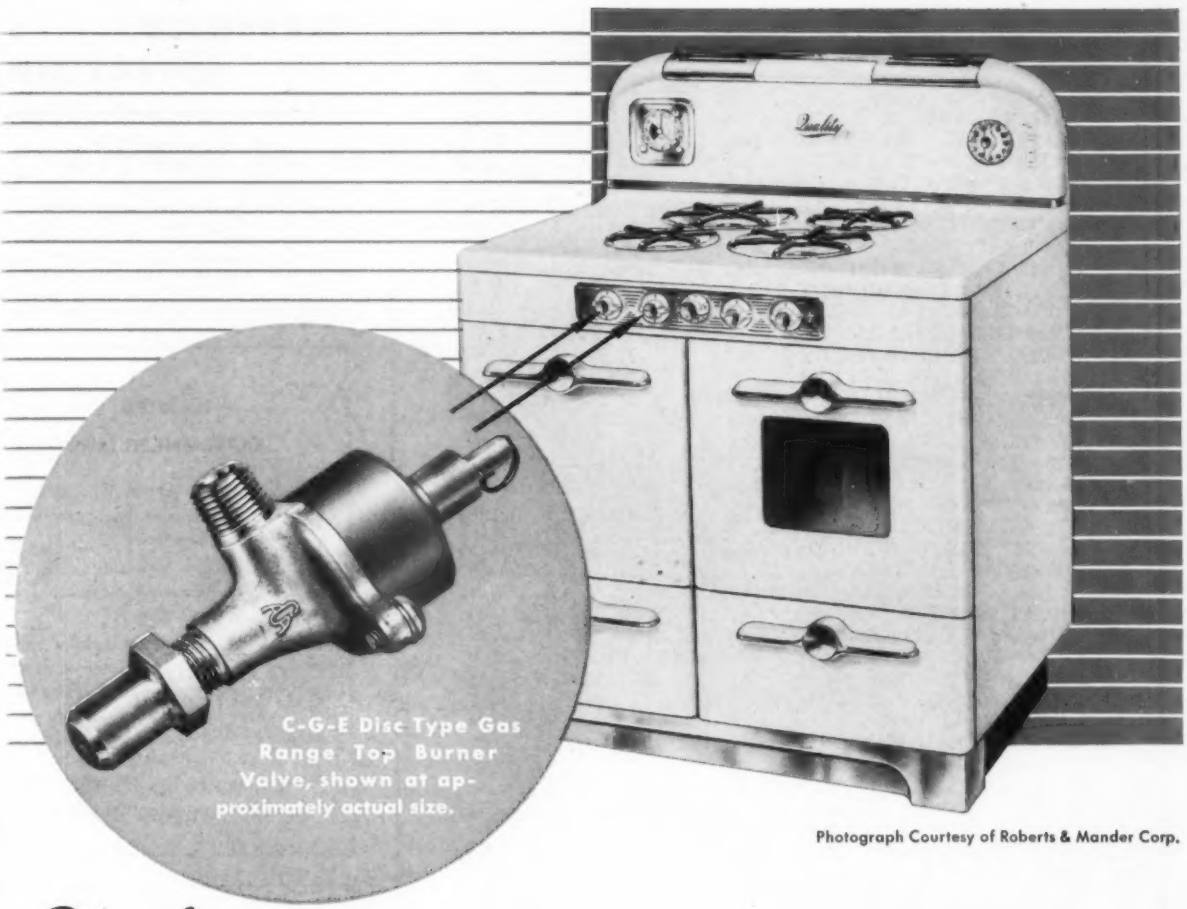
to Page 72 →

Wichita U. has 30-foot porcelain enamel counter

A 30-foot, 4-inch long porcelain enameled fountain was installed recently at Wichita Municipal University, Wichita, Kansas, by The Bastian-Blessing Company, of Chicago.

The counter has a 5-foot, 5-inch return end with a 3-foot radius corner. The counter is 42″ high and has a 1¼″ x 16″ black top slab. The panels of the counter are straw colored porcelain enamel with flush butt joints. The foot rails are of 18 gauge stainless steel. The fountain units are also of stainless steel.





Photograph Courtesy of Roberts & Mander Corp.

Quality stands for ROBERTS & MANDER... and C-G-E (High-Low Locking) DISC VALVES

Yes, Roberts & Mander have taken still another step to insure increasing acceptance of the trade name "Quality"—by standardizing on C-G-E Disc Valves for the majority of range models. The C-G-E Disc Valve was selected because of these important design features:

- Every valve is complete with easy-to-reach high-low flame adjustment and safety lock.
- Forged brass sealing faces eliminate seizure.
- Minimum contact between body and disc seals perfectly—and insures uniform turning torque during continuous operation at any heat.
- Available for use with all types of gases.

These clear-cut advantages of C-G-E Disc Valves are becoming increasingly apparent *—more and more range manufacturers are adopting this improved valve as standard equipment.* Your dealers and their service men will appreciate the new, improved high-low flame adjustment—and Mrs. Range Buyer wants the safety locking feature. Both are available in C-G-E Disc Valves at a substantial cost reduction—write today for full details.

CERTIFIED GAS EQUIPMENT, INC.
1823 MONITOR AVE. • CHICAGO 39, ILLINOIS